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THE CONDOR

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THE·CONDOR
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Volume XX September-October, 1918 Number 5

NOTES ON THE NESTING OF THE MOUNTAIN PLOVER

By W. C. BRADBURY

WITH EIGHT PHOTOS

IN JUNE, 1916, J. D. Figgins, Director of our local Museum, reported having seen several adult and young Mountain Plover (*Podasocys montanus*) about twenty miles east of Denver. Early in May of the following year, 1917, accompanied by a couple of young assistants I motored to the region, keenly watching for birds of this species, en route. Upon our arrival we scattered in different directions for an hour's search, but found nothing.

On our third trip to the same neighborhood, May 13, we discovered our first pair of birds from the auto. They were making short runs, and after watching them for a while, we lined up and systematically searched the ground over a large radius to discover the nest. We were obliged to leave without success, however, a stake being first driven into the ground to locate the point at which the birds were seen. The observations which follow will cover in general terms the nine trips to the same region, in which six sets, consisting of three eggs each were secured.

The ground is an open, rolling prairie, above the line of irrigation, and is devoted to cattle range. It is several miles from natural surface water and streams, and is covered with short-cropped buffalo or gramma grass, two or three inches high, with frequent bunches of dwarfed prickly pear, and an occasional cluster of stunted shrub or weed, rarely more than one foot in height.

With the six sets secured, in no instance had the parent bird taken advantage of the slight protection offered from sight or the elements by the nearby cactus, shrubs or uneven spots of ground. In each case, she had avoided such shelter, locating in the open, generally between the small grass hummocks and not on or in them; there was no evidence of the parent birds having given more thought to nest preparation or concealment, than does any other plover.

In two of the sets the eggs were all individually embedded in the baked earth to a depth of one-eighth to one-fourth of an inch, evidently having settled when the surface of the ground was reduced to soft mud by rain-water collecting in the slight depressions. As the ground dried the eggs were fixed in a perfect mould or matrix, from which they could not roll. In fact they could hardly be disturbed at all by the sitting birds. The only nesting material was a small quantity of fine, dry rootlets and dead "crowns" of gramma grass, the eggs in some instances being slightly embedded in this lining. As it is also present in all other depressions on the prairie it is highly probable that here as elsewhere it was deposited about the eggs by the wind and not through the agency of the birds themselves. (See figure 25.) The protective coloration of

Fig. 25. Eggs and nest of Mountain Plover, as photographed May 20, 1917, about twenty miles east of Denver, Colorado. Each egg had settled in the soft mud which when dried formed a perfect mould or cast from which it could not roll.

the nest and eggs, as well as of the rear view of the birds themselves, even when in motion, is unsurpassed. In no instance, except one hereinafter noted, was the bird seen to leave the nest, nor was any nest found except in the immediate vicinity of moving birds.

The site of the first pair of birds located and worked on May 13, 1917, was visited and carefully searched on three subsequent trips, always revealing one or both birds in practically the same spot, but never the nest.

On May 20, during a rain storm, we noticed two birds running at a distance of about thirty yards from the road. Stopping, four of us spent more than

half an hour in an unsuccessful effort to locate the nest, during which time the birds disappeared without evidencing interest in our movements. Upon our return a couple of hours later, they were again where first seen, and after a long search, during which the birds ran out of sight, a single egg was found. This

Fig. 26. MOUNTAIN PLOVER, WITH WINGS RAPIDLY OPENING AND CLOSING, AND BILL OPEN, AS SHE FOLLOWED THE CAMERA MAN BACK TO THE NEST.

apparently had been dropped at random, and so far as I could see, might as well have been deposited anywhere else on the prairie.

Placing a small stake with a tag about twenty steps distant, we left the egg. On revisiting the site one week later, May 27, my assistant found the birds present and finally located the nest, which then contained three fresh

Fig. 27. MOUNTAIN PLOVER, BETWEEN HER EGGS AND THE CAMERA, JUMPING FORWARD TO ATTACK THE FOOT OF THE PHOTOGRAPHER, WITH WINGS SNAPPILY OPENING AND CLOSING.

eggs. He reported that on this occasion one bird remained close by all the time he was in the vicinity of the nest, with wings outspread and making much fuss. She was the first to be observed making demonstrations of this character. These were the only perfectly fresh eggs taken.

On May 18, 1918, we visited the ground covered last year, and after tramping until hot and weary, entered the auto for a rest, slowly running the machine back and forth across the prairie. A bird was finally spotted, sitting bolt upright on its nest, but twenty or thirty yards distant. After watching for a while, Ludwig, my assistant, cautiously approached with the camera to within perhaps thirty feet, when the bird left the nest, which contained, as usual, three eggs. Then followed an unusual demonstration to attract the photographer from the vicinity. Spreading her wings horizontally to their extreme width while standing, then falling flat with her neck and wings extended their full length on the ground, at times with beak open (see figure 26), she retreated as he approached, or followed closely as he returned towards the nest. These antics were repeated until finally the camera was set up with one foot of the tripod within a foot or so of the nest, with a view of getting an exposure through the use of a string attachment.

During the focusing of the camera the bird exhibited great agitation, danc-

Fig. 28. Mountain Plover approaching her eggs (in left foreground).

ing and jumping about Ludwig and the nest with wings rapidly opening and closing as if intending a direct attack. She finally settled on the eggs facing the camera. Desiring a picture showing the bird in action, Ludwig would gently swing his foot before her, sometimes touching her bill, when she would jump sidewise, forward or backward, and with bill open and wings snappily opening and closing, attack his foot. So rapid were her motions as she darted in and out of focus that it was difficult to get a perfect picture. (See figure 27.) Two of us were lounging on the ground about thirty feet away during this performance. But one bird was present on this occasion; when the eggs were blown they proved to be about one-half advanced in incubation.

On May 22, in the same vicinity and under similar conditions, we spotted a bird running about forty feet ahead of the machine. A short search soon located the nest and eggs, and Mr. Figgins, my companion on this trip, spent considerable time in an unsuccessful effort to photograph the bird. She evidenced no interest or solicitude whatsoever, but continued short runs just out

of range and finally took wing, an unusual occurrence under the circumstances. Nor did she return while we were photographing the nest and collecting the eggs, or during the considerable time we afterwards spent there. These eggs were the farthest advanced in incubation of any taken, being nearly ready to hatch.

In the case of the only perfectly fresh set of eggs taken, the parent, as stated, was very solicitous; in the half incubated set the bird exhibited extreme anxiety and aggressiveness; whereas, with the set about ready to hatch the parent cared for nothing but a quick escape. None of the others evidenced

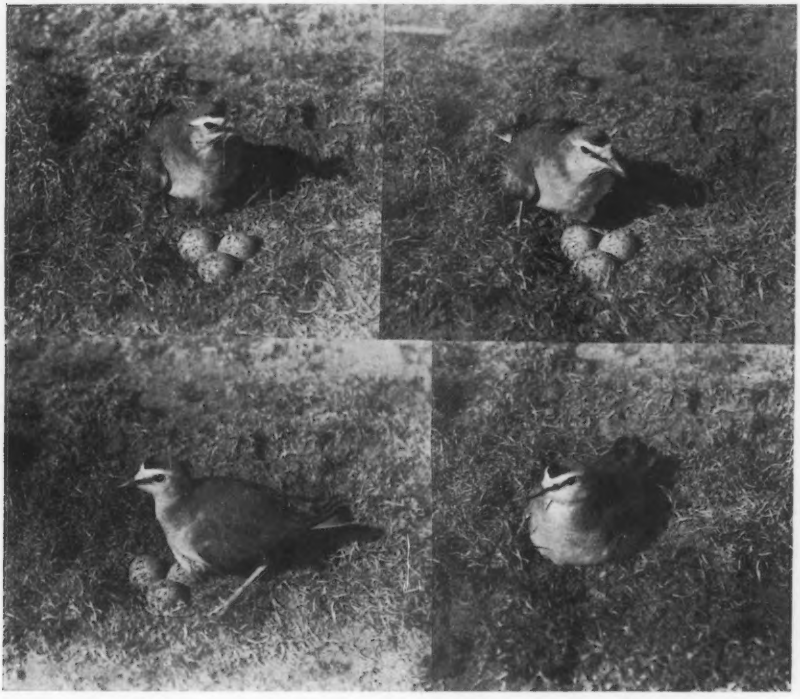


Fig. 29. Four different poses of the Mountain Plover as she approached her nest, watching the photographer intently all the while.

more than casual, if any, interest in our proceedings. All of which rather "balls up" the theory I held, that the nearer the completion of incubation the more solicitous the parent. All eggs were comparatively fresh except one set taken on May 20, 1917, and the two sets taken, as stated, this year, and there was usually but one bird present. I have had no opportunity to study the parents with their young.

The fact that this many sets of Mountain Plover eggs were taken within the comparatively small area of probably one-half by one and one-half miles, together with my failure to note them on many other collecting trips on the

Fig. 30. Mountain Plover partially covering her eggs within two feet of the photographer.

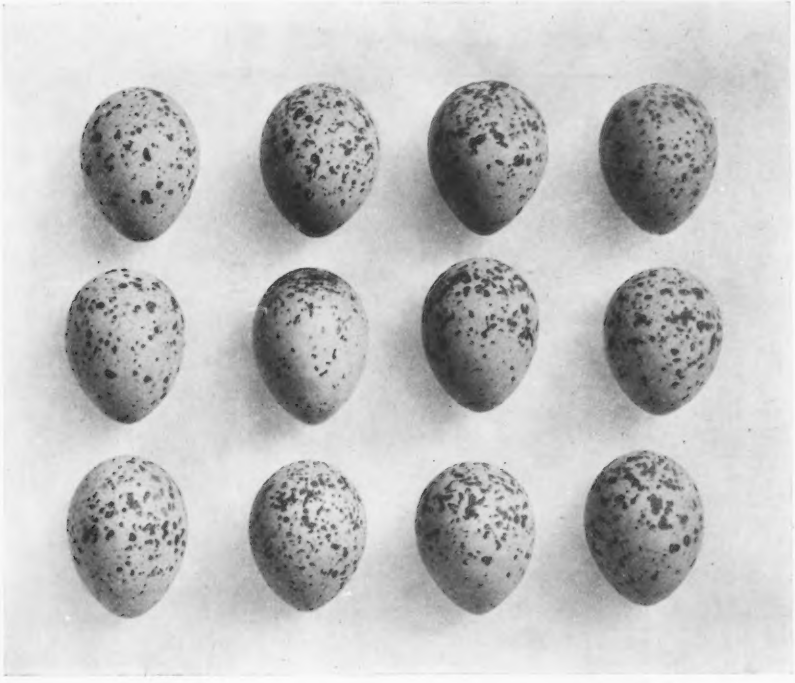
prairies (numbers have been taken elsewhere in the state) would seem to indicate they are in a measure gregarious during the nesting season.

All sets collected contained three eggs and the dates are as follows, two being secured by other parties. In 1917: May 20, two sets; May 27, one set; May 28, one set; May 29, one set; June 7, one set. In 1918: May 18, one set; May 22, one set.

Fig. 31. Eggs of Mountain Plover, in place. Photographed May 20, 1917.

The accompanying photograph by Mr. Figgins (see figure 32) is of the four sets taken in 1917. There is some variation, of course, in the ground color of the eggs; but such difference is fully as noticeable in eggs of the same set as between those of different sets.

The following color description (Ridgway's Color Standards used) and measurements are by Mr. Lincoln, Curator of Ornithology, Colorado Museum of Natural History. Ground color, olive buff to dark olive buff or light yel-



4 3 2 1

Fig. 32. Four sets, of three eggs each, of Mountain Plover. Sets are numbered, by vertical row of eggs, as referred to in text.

lowish olive, heavily spotted with blackish brown intermixed with smaller and paler spots, somewhat confluent on the larger end, varying in individual cases.

MEASUREMENTS IN INCHES OF EGGS OF MOUNTAIN PLOVER

Set no. 1	Set no. 2	Set no. 3	Set no. 4
1.45x1.11	1.48x1.10	1.43x1.10	1.55x1.13
1.47x1.10	1.45x1.12	1.51x1.11	1.50x1.13
1.47x1.11	1.49x1.13	1.49x1.14	1.49x1.13

Denver, Colorado, March 1, 1918.

FRANK STEPHENS—AN AUTOBIOGRAPHY

WITH PHOTO

THE EDITOR of THE CONDOR is planning to publish a series of autobiographies of the older ornithologists of the west. He insists that I initiate the series, and promises to get others to follow. I do not like the task, but as I see some justice in his argument that I begin the series, I will "do my bit".

I was born in a log house on a farm in Livingston County, New York, April 2, 1849. As a small boy I attended a country school pretty regularly until

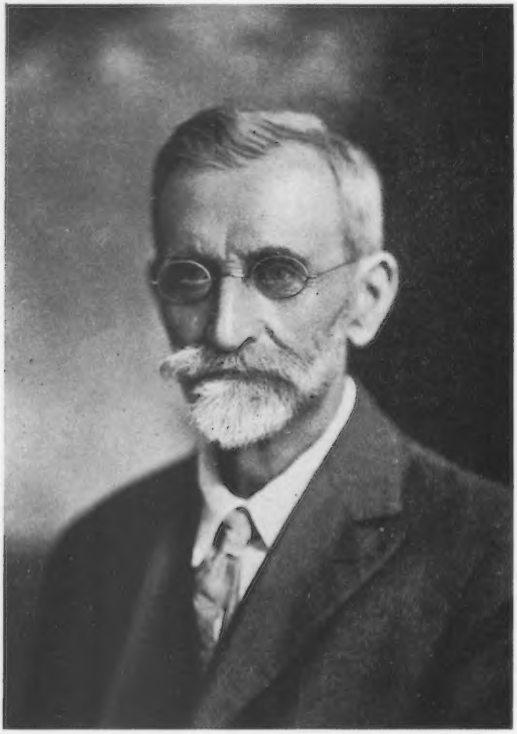


Fig. 33. FRANK STEPHENS.

thirteen years old, when the family moved to Michigan. After this time my school days were few. I never attended other than country schools and not even these after I was sixteen years old. Among my boyhood recollections those pertaining to the Civil War then in progress are prominent. The drain of men to supply the army was so great that every one's help was needed, so that by the time I was fifteen years old I was taking a man's place in the fields to the extent that I was able. I remember following the reaper in the wheat field when the binding crew consisted of two of us "men" and four young women.

After the end of the war the next year laborers were still scarce and I did my part to help support the family.

I was fond of reading, and having a leaning toward natural history I eagerly read everything in that line I could find. Living far from libraries I did not see many books on natural history subjects. I remember reading a set of Mayne Reid's books, including the "Cliff Climbers", etc.

Some years later the family moved to Illinois, and there at the age of twenty-two I had the opportunity to take lessons in taxidermy—"stuffing" birds. It really was stuffing them, too. I was never satisfied with the results. I think my preference was for botanical work, but I had no opportunity to get started in it. At the age of twenty-four I married and moved to Kansas and a few months later started on west with a pair of little mules and a spring wagon. We wintered at Colorado Springs where I became acquainted with Mr. Charles E. Aiken, then a well known ornithologist. He showed me how to make bird skins and agreed to purchase ornithological material to be taken in New Mexico and Arizona. Mrs. Stephens and I left Colorado Springs in March, 1875, driving by way of Santa Fe and Albuquerque to the neighborhood of Silver City, then a new mining camp, in southwestern New Mexico, where we stayed a year, doing more or less bird collecting.

In the summer of 1876 the Apaches were troublesome, with prospects of worse times ahead, and as we were living on an exposed mountain ranch, we decided that we had better get out. The Indians had stolen the horses I had traded my mules for, but I bought a yoke of oxen and started on for California. We were fortunately not molested on the way, but settlers were killed ahead of us and after we passed. We reached Tres Alamos, Arizona, in September, and stopped there a month, as this place was practically out of the Apaches range at the time. Passing through Tucson and the Maricopa Indian village we reached Yuma, November 24, crossing into California that afternoon. At that time Yuma was a comparatively busy place. There was not a mile of railroad then in Arizona or New Mexico, and the mails were carried on six-horse stages passing Yuma each way every four days. Freight came by ocean steamer to the mouth of the Colorado River, thence by river steamer to Yuma, where it was transferred to freight wagons to be delivered to the various government posts and mining camps.

Ever since the Civil War we had used greenbacks for money, coin being at a large premium. I did not know that California was on a specie basis and got a jolt when we crossed the Colorado at Hall Hanlon's ferry, seven miles below Yuma. Our ferriage bill was four dollars and I handed Hanlon a ten dollar greenback. He handed me back a silver dollar, the first one I had handled for years. I said: "You have made a mistake, I gave you a ten dollar bill". He said: "This is California and greenbacks are worth only fifty cents on the dollar here".

We had a hard time crossing the Colorado Desert, and when we reached Campo the oak timber and the valleys looked so good in comparison with the country we had just come through that we made a permanent camp. I continued collecting birds for Mr. Aiken for several months. The next summer we came to San Diego and in the fall went on to Riverside, where I farmed one year, and the next year to Wilmington, doing a little collecting now and then. News of mining activities at Tombstone, Arizona, lured us back to that region in 1880. The spring of 1881 I collected birds in southeastern Arizona for William Brewster and came back to California that summer, locating at San Ber-

nardino. In 1884 we spent five months in southeastern Arizona again, collecting birds, including a trip across Sonora to the Gulf of California.

In 1887 we moved to the mountains east of San Diego, the nearest post office being known as Ballena. In 1889 a new post office was established at Santa Ysabel which was more convenient for me. In 1892 a post office, called Witch Creek, was established on the farm next mine. Skins made by me from birds taken in the neighborhood of my home were labeled by these different locality names accordingly.

In 1891 I accompanied the Death Valley Expedition as one of the collectors, and for several years I did intermittent work for the Biological Survey. In the fall of 1897 I moved to San Diego, where my home has since been. In January, 1898, my first wife died and the following August I married Miss Kate Brown. No children were the offspring of either marriage.

Up to 1885 I had worked exclusively on birds, but that year, at Dr. Merriam's suggestion, I added mammals, and since that date I have perhaps spent more time on mammals than on birds. I began to feel the need of a book on California mammals, and, as no one else cared to undertake it, in 1893 I decided to try to publish an account of the mammals of California, though I did not feel well equipped for the job. I engaged W. J. Fenn to make some drawings for illustrations and began getting together what data I could. In March, 1906, I arranged with the Southern California Printing Company of Los Angeles to print and bind 1000 copies of "California Mammals". They had just begun work on it when the San Francisco earthquake occurred. The fire destroyed the printing establishments of San Francisco, with the result that a large amount of printing orders was transferred to Los Angeles. In a few days the printers wrote me that I had better come there and help. I found them crowded with work and my job had to be linotyped and printed a form at a time, as it could be worked in. I had no experience as a proof reader but had to do it, and a poor job I made of it. It took us two months to finish the job. I may as well say here for the benefit of others that publishing books of this class does not pay. My receipts on account of "California Mammals" are now over twelve hundred dollars behind the expenses incurred. If I had let established publishers publish the book on the best terms offered I would have been much worse off.

Perhaps some persons have wondered at the cover title "West Coast Nature Series". My friend W. G. Wright had just published "West Coast Butterflies", and we were considering trying to get out a series of nature books covering other classes and this was in furtherance of some such plan. Most of the edition of "West Coast Butterflies" was burned in the San Francisco fire, and this loss, with the failure of my book to pay expenses broke up the scheme.

In the spring of 1907 Mrs. Stephens and I formed part of Miss Alexander's party in Alaska. This work was in a very different region from that which I was accustomed to, and we found it very interesting. We returned home in October. In the spring of 1910 I accompanied Dr. Grinnell on the Colorado River expedition of the Museum of Vertebrate Zoology. Since then I have not done much field work, leaving that for younger men, though I chafe sometimes at being tied to indoor work and often plan to get out again. I haven't given up the hope of doing more field work. Although I am in my seventieth year I am in good health and able to do a lot of hard work yet.

FRANK STEPHENS.

San Diego, California, May 26, 1918.

EVIDENCE THAT MANY BIRDS REMAIN MATED FOR LIFE

By F. C. WILLARD

ONE OF THE strongest impressions I had as a boy, and later as a student, in reading various books and papers on the life histories of birds, was the comment frequently made therein that this or that species remained paired or mated for life. It was soon borne in upon me that this assertion was applied practically to raptores only. While I turned this over in my mind every time I met the statement I always wondered why it was so.

Not until I went to southern Arizona, in 1896, did I begin real active field collecting. I had collected some in Illinois, but never days or weeks at a stretch as I began to do in Arizona. Here three special fields drew my attention annually, the San Pedro River valley near Fairbanks, the Huachuca Mountains, and the vicinity of Tucson. After a few consecutive seasons spent in working these sections, I began to realize that I could expect to find a pair of some certain species of birds nesting within a very short distance of a given spot every year, and I at once began to wonder if it were possible that an occasional pair of birds other than raptores remain mated for life.

Not to spend more time in following the processes of my mind in regard thereto, I want to give some specific instances which have led me to the opinion that it is more usual than unusual for land birds to remain mated for life. Having had no experience with water birds, I shall exclude them from my conclusions.

The flycatchers are a well represented family in Arizona, and there are species that are found in all three of the sections above mentioned and other species that are found in but one. The Vermilion Flycatcher (*Pyrocephalus rubinus mexicanus*) is one of the former. A pair nested every year in the trees about our house in Tombstone. We all watched for their arrival. Seldom did a third bird of this species appear on the place, though every season the male went through his mating antics just as though he was courting a new spouse. How do I know it wasn't a new spouse? I don't know it except that my observations have led me to make up my mind to the point of conviction that it was the same pair year after year. The selection of the same forks for the different nests each season, the similarity of the eggs as far as they were examined (I did not collect any from this pair), the lack of fear they possessed, so marked in comparison to that shown by others of the same species in other places, all these helped to convince me.

Along the San Pedro River I had certain willow trees marked out, in each of which I always expected to find a Vermilion Flycatcher's nest. If it did not happen to be in the exact tree it was sure to be in an adjacent one, and this in spite of the fact that when I collected a nest of this bird I always tried to take it on the fork if possible. One pair always selected such a large fork that I could not collect it, and the result was that the same few forks were used by this pair each season, sometimes one and sometimes the other. Frequently the same fork was used twice or oftener in the same year.

In the Huachuca Mountains there was a certain route I used to cover on a three day's trip. Along this route I had certain pairs of the various birds "spotted". The Coues Flycatchers (*Contopus pertinax pallidiventris*) were particularly reliable and in ordinary seasons I could give many of the particulars in regard to the different nests, before I had actually seen them, with a

degree of surety that was surprising to myself. The number of eggs to be expected, the shape, shade of ground color, and style of markings could be given with great accuracy. The general characteristics of the nests, whether compact, deeply cupped and neatly finished, or the opposite, were also readily "called" before the nest was seen. The actions of the different pairs around the nests, etc., were all corroborative to an extent that seemed to justify my assumption that the same individuals were there each year. Among the other flycatchers, the Buff-breasted (*Empidonax f. pygmaeus*), Traill (*Empidonax t. trailli*), Arizona Crested (*Myiarchus m. magister*), Ash-throated (*Myiarchus cinerascens*), Sulphur-bellied (*Myiodynastes luteiventris*), and Olivaceous (*Myiarchus l. olivascens*), could all be used to further strengthen my conclusions.

Hummingbirds also may be cited. One certain Rivoli Hummingbird (*Eugenes fulgens*) always built in a certain small sycamore or in a neighboring maple. Unless disturbed before the eggs were laid I could count on a set from this bird. However, if disturbed before the eggs were laid she left that locality and I could not find where she then built; but the next year was sure to see her back to the old homestead again. A Blue-throated Hummingbird (*Coeligena clemenciae*) built nest after nest on the same hook. One that I collected showed four stories at least. When I took it I put another hook in its place and had the pleasure of photographing the young raised in a nest built on it. Broad-tailed (*Selasphorus platycercus*) and Costa (*Calypte costae*) hummingbirds also helped me along to a certain extent. One of the latter always built on a hammock hook hanging from a rafter in the porch of a neighbor's house. Another always built on the same branch of an ash tree near the San Pedro River.

Among the warblers, Sonora Yellow (*Dendroica aestiva sonorana*) and the Lucy (*Vermivora luciae*) were particularly convincing. Not only did they select the same vicinity for their nests each year, but the type of the eggs was so consistently the same that even an unwilling observer would have had to acknowledge the strong probability that what I am trying to demonstrate was a fact. Painted Redstarts (*Setophaga picta*) were also good ones to count on. The other warblers were so rare and hard to find that they would hardly prove convincing, though both Grace (*Dendroica graciae*) and Olive (*Peucedramus olivaceus*) warblers could be observed in the same bit of forest each year.

In one certain clump of fir trees I could always count upon finding two pairs of Western Evening Grosbeaks (*Hesperiphona v. montana*) though I was not always successful in finding both nests. This I believe was largely because I was not persistent enough. A pair of Western Tanagers (*Piranga ludoviciana*), could also be counted upon here. In fact, this group of trees bears me out in my belief with the following list which I could always find here. Besides the two mentioned, there were Western Robin (*Planesticus m. propinquus*), Coues Flycatcher (*Contopus pertinax pallidiventris*), Western Wood Pewee (*Contopus richardsoni*), Cassin Kingbird (*Tyrannus vociferans*), Plumbeous Vireo (*Lanivireo s. plumbeus*), Hepatic Tanager (*Piranga hepatica*), and Long-crested Jay (*Cyanocitta s. diademata*). Across the trail, but near enough to be listed with the others, was a pair of Western Warbling Vireos (*Vireosylva g. swainsoni*). I find that my notebook also tells me to look for one pair each of Arizona Junco (*Junco phaeonotus palliatus*), Red-faced Warbler (*Cardellina rubrifrons*), Virginia Warbler (*Vermivora virginae*), Western House Wren (*Troglodytes aedon parkmani*), Canyon Wren (*Catherpes m. conspersus*), and Painted Redstart (*Setophaga picta*) in this immediate vicinity. By immediate I mean within a radius of one hundred yards.

Among the woodpeckers, one of the best evidences that the same pair remains together year after year is the series of nesting cavities excavated up and down a single dead tree or branch. A pair of Cabanis Woodpeckers (*Dryobates v. hyloscopus*) had nested for several seasons in the dead top of a tall pine. One winter, this broke off and lodged in the top of an adjoining pine. Even with their nest site in this apparently insecure position the woodpeckers were unwilling to leave it, and their new nest was found dug in the same old tree top in its inverted position. Along the San Pedro River the Cactus Woodpecker (*Dryobates s. cactophilus*) is the only one nesting at all commonly. In the lines of willows bordering the irrigation ditches and in the small groups found along the river banks, I had quite a list of pairs whose nests I could count upon finding within certain circumscribed areas. They exhibited individual characteristics. One pair never dug its nest lower than twenty feet from the ground and usually selected a site that overhung the water. Another liked short stubs not over five or six feet tall. Another was partial to fence posts. While these selections were not invariably followed they were so usual that I always began my search by examining all the available sites of that character before looking at others and was usually successful in my first search. In the giant cactus around Tucson, the Gilded Flicker (*Colaptes chrysoides*) and the Gila Woodpecker (*Centurus uropygialis*) were very common and I have a long list of pairs of these two species with specified groups of cactus where they are to be found.

Of the doves, the Inca Dove (*Scardafella inca*) and Mexican Ground Dove (*Chaemepelia p. pallescens*) illustrate my point the best. One pair of Inca Doves in Tombstone nested either in an elderberry tree on a certain corner, or in a mulberry tree some seventy-five yards farther down and across the street. Even repeatedly losing their eggs failed to disturb them. One pair of Mexican Ground Doves always nested in a certain clump of willow brush or an adjacent large willow tree. I believe the other two nesting doves, the White-winged Dove (*Melopelia asiatica*) and Mourning Dove (*Zenaidura m. carolinensis*) would offer as good examples were it not that the locality where I most regularly collected them, along the San Pedro River near Fairbanks, was a favorite hunting ground for the sportsmen of that region and that the pairs were constantly being broken up by one or the other of the birds being shot.

The Canyon Towhee (*Pipilo f. mesoleucus*) and Abert Towhee (*Pipilo aberti*) could both be relied upon to nest regularly in given spots. A pair of Canyon Towhees had their first nest of the season always in the vines growing on our house. Their second nest was in a nearby umbrella tree. Their third nest was either in this same tree or in a small cottonwood just outside the fence. In this case the marked similarity of the eggs each year was very good evidence that the same bird laid them, and as the two birds were resident and hung around the house all the year it seems almost an assured fact that she had the same mate each time. Along the San Pedro River I had a series of pairs of the Abert Towhee located from which I could secure sets whenever I chose, during the season. As many of these birds built in situations where I could collect nothing but the nests (i. e., without the supporting branches) they frequently used exactly the same site year after year.

I could multiply the illustrations used and make them include the Anthony Green Heron (*Butorides v. anthonyi*), Western Yellowthroat (*Geothlypis t. occidentalis*), Cooper Tanager (*Piranga r. cooperi*), Western Blue Grosbeak (*Guiraca c. lazula*), Arizona Pyrrhuloxia (*Pyrrhuloxia s. sinuata*), Cassin and West-

ern kingbirds (*Tyrannus vociferans* and *Tyrannus verticalis*), the three orioles, Bullock, Arizona Hooded and Scott (*Icterus bullocki, Icterus c. nelsoni* and *Icterus parisorum*), the last a particularly good example to cite, Lead-colored Bush-tit (*Psaltriparus plumbeus*), the jays, nuthatches and wrens, and in fact almost the whole list of nesting birds as I met them year after year, to demonstrate the conclusions arrived at, namely, that it is far more usual for the same pair of birds to remain mated for life than it is unusual.

The nature of these observations is such that they are not capable of scientific proof but they are very convincing nevertheless. One of my most valued notebooks is based on the facts enumerated and bears the title of "Nest census of known breeding pairs".

Farmingdale, Long Island, New York, February 4, 1918.

A RETURN TO THE DAKOTA LAKE REGION

By FLORENCE MERRIAM BAILEY

(*Continued from page 137*)

IV. THE GREBE OF THE SILVERY THROAT

A flash of a long silvery throat disappearing in a lake had haunted me for four years, for it had been my first sight of the Western Grebe, the silvery-throated King of the Grebes. That was on one of the Sweetwater lakes and now, on my return to them, a distant glimpse of another white throat at the foot of the north lake filled me with hope. So, starting out in the morning, I followed down the shore under cover of the tules, keeping a sharp lookout, bending over in the low tules, but standing erect, well hidden, in the high ones, as they rose above my head. Even when exposed, there was much in my favor, for the birds of the lake had to look at me toward the light and, used to brown cattle splashing and shoving through the reeds and canes, in a poor light might not discriminate between my bent, brown and green figure and the low familiar forms. In the shallow water, in imitation of silent paddling, I waded slowly, keeping my boots under water, and in places where the water was not too deep, set up my camp stool behind a thin screen of waving tule, watching at my leisure, content to let the green rods wave across my glass, if only I could be unobserved.

Of course I was observed by some of the tule population. Two Coots went splashing out into the lake, another sputtered and scolded, and a Ruddy Duck rattled his castanets close by; but a Sora ran his scale unafraid and the birds out on the lake went about their business quite oblivious of me. The only exceptions were due to bad breaks on my part. Once I raised up full height above the low tules, making a passing Crow caw distractedly, and sending three swimmers inside a tule wall. As I immediately took the hint and sat down, the swimmers came out again reassured.

It was a wonderful morning to me, for I had never really seen the King of Grebes before. At the remote foot of the lake, I found his breeding grounds. A high stand of tules rods wide with indented bays and jutting tule points, offered safe cover for nesting colonies, while the Big Ditch, approached by a wind-

ing inlet between tule beds, cut the pass, enabling the birds in time of need, bad wind or weather, to shift quickly from lake to lake.

When I first looked across the mouth of the largest tule bay, hoping for a sight of the one white line I had seen before, I started, for not one but four white lines were in view. One slid obliquely forward as I watched, and by this characteristic movement was transformed from a line into a grebe throat. As I watched the bay, one by one other silvery throats came in sight until I had excitedly counted twelve.

The Grebes had evidently had an early breakfast, as, from half past eight when I found them, for over two hours they mostly sat around, resting and preening themselves. Their corner of the lake, the warm south-east corner, however, was a quietly busy harbor. A few families of nondescript inconspicuous ducklings swam about with their brown mothers, sometimes stringing out in single file, cocky Ruddy Ducks were also in evidence, and seven bricky Redheads attracted five others which flew in and lit down with a splash, after which the twelve swam about together. A grebe that came up wet and bedraggled must have been the Holboell, though seen in a poor light that made it look characterless beside the long white-necked Æchmophorus. Gulls and Black-crowned Night Herons stood on posts down the lake, and gulls disported themselves about the pelican rocks that projected from the pass.

But the only real figures on the stage were the snowy-throated grebes. They seemed decidedly sociable, for the most part keeping in groups of their own kind, but sometimes swimming about and preening themselves unconcernedly close to the Redheads and others of their neighbors. From the first, when watching the grebes at a distance, I was puzzled by figures that instead of a long white neck had only a round white breast patch. But finally I discovered that they were grebes whose necks were laid down on their backs to rest! Nine grebes were seen together at one time in front of a brown-topped level tule wall, some with heads resting on their backs, some facing one way, some another.

In different poses they looked strikingly different. Facing you, the knife-blade bill served as the stem of a broad black Y, the crest widening out at the back of the head. When the head was canted over in preening the back, this black was lost sight of, and the effect given was of a perfectly white bird, its neck making a long white loop. The white effect was also given when one facing you rose above the lake and flapped its wings showing their white linings. Two grebes preening their feathers a short distance apart made a pretty picture, now raising their long white necks to their full height, now laying them down as they preened their wings and back—now up, now back, now up, now back; their necks when raised full height looking amazingly long. While in some poses the grebes were all white, in others, back to you, they were all black, the black crest and black line down the back of the neck at a distance in some lights and at some angles outlining a black bird, and when preening, a black hook. When one of the birds turned on one side its breast gleamed across the water, as Chapman's Handbook has it, "like a flash from a mirror", surprising in its intensity.

Two of these Swan Grebes, as they are well called, standing near each other with stately heads held high made a beautiful picture. Once two of them swimming side by side to my amazement reared up full length above the water and with heads raised suggesting white snakes about to hiss, rode the water

ominously. At last, dropping down, they paused, and then made a sudden rush through the water! What did it mean? Was it likely that, on July 12, courtship rivalries were still rife? Were some second nests in prospect?

When the grebes were scattered over the lake, their strange raucous calls came back and forth over the water, some grating and screechy, some with a tremolo, as *quaw-kiter'r'rah,* others strident and far reaching, as *kree-wee, kree-wee,* or *queer-wee'-queer-wee'.*

After having rested for a long time, at about 10:40 some of the grebes began to dive, but at 11:22 apparently all twelve were resting, heads on back out on the water. When I stood up to start home, nine heads were raised, and a moment later, not a grebe was to be seen. But sweeping the lake with my glass a few moments afterwards, far out on the lake the missing submarines were discovered.

Attempting to take a short cut to shore through a high stand of canes, I found them not only noisy, hard to crowd through, and disagreeably high above my head, but offering doubtful footing between clumps. A strong sulphurous smell such as I had found in places in the sloughs came apparently from springs, on the edge of which my boot came up out of soft mud, turning the water black. Was it in such a place that the abandoned hip boots found by a local hunter had suddenly been left behind? The firm tule bottom, even with water knee high, seemed peculiarly attractive at the moment, and I found myself quite willing to wade the long way home.

The next morning I started back to see my grebes at seven o'clock, but found the tule bays where they had been the day before, entirely deserted. Crossing to the south side of the pass near the Big Ditch, however, I found the twelve out on the lake, which was dotted with ducks. To get a good observation station I had to cross a few rods of open ground, and though I leaned over in bovine imitation, at my approach, a goodly flock of ducks and two Black-crowned Night Herons rose from a cool, tree-shaded bay. Putting down my camp stool inside a small clump of willows grown knee high with snowberry bushes, I looked through a waving willow screen upon the ducks and grebes; but it was a little too open and the light was wrong to hide me from the lake. Crows cawed over my head loudly enough to inform the entire population and small flocks of ducks rapidly crossed the pass, wings whistling over my head; a Yellow Warbler started to light above me but fled in terror on discovering me, and worst of all, the grebes acted as if they had seen me. Was I really the most conspicuous object on the water front? Would those Crows never hush? Oh for a Kingbird which, as the farmer declared, could "make a Crow hop!"

Out on the lake a flock of ducks were resting, heads over shoulders, and as I moved my glass down their line in counting them, I stopped abruptly, for instead of a dusky oval rocking drowsily on the water, a slender, vivacious white-necked grebe interrupted the count. Compared to the animated figures of the grebes, the phlegmatic ducks looked positively lumpish, suggesting nothing so much as rows of dark buttons on a card!

As I was two hours earlier than on the previous morning, while some of the grebes were resting, most of them were pluming and diving. When I had first entered my ineffective blind, the grebes had called a great deal, very pointedly it seemed to me, for with long white necks raised they seemed to be looking my way; but after a time their high pitched *kree-ka-ree, kree-ka-dee, kree-ka-ree,* or *kee-eh-keek* came from both sides of the pass, showing that al-

though I had failed to see them, there were some in the other lake, the two flocks apparently calling to each other.

After these two mornings with the grebes, I went to Stump Lake, but while there the thought of the rare opportunity I was losing worried me until I actually dreamed of the beautiful grebes. Nevertheless, so much had been told me of the great flocks of migrating shore birds to be seen on Devil's Lake that I felt I must go there before returning to the Sweetwaters. An ideal place was found from which to watch them—a stone farmhouse on the bluff above Creel Bay, in the deep, quiet northwestern part of the lake. At the foot of the bluff was a broad beach where myriads of shorebirds had congregated in previous years, but one of the unusual seasons that so often balk the plans of the traveler was experienced here—hardly so much as a sandpiper was seen during my stay.

But here again, my compensations were rich. On the lake in plain sight from the house I found a flock of the white-throated grebes, and during my visit they increased in numbers from twenty to fifty-two! For a week I watched them—not from a tule marsh in water up to my knees—but with my glass from an easy chair on a broad piazza whose wide, woodbine draped arches framed the picture of white clouds and blue lake—spirit lake, as its old Indian name—Mnewahkon—is interpreted; a wide lake of blue and white waters, of shifting, subtle beauty under varying wind, sky, and cloud, affording appropriate setting for its white gulls and silvery-throated Swan Grebes. Where had the beautiful grebes gathered from? As their numbers swelled, I liked to think that perhaps some of my own Sweetwater colony had come to me here.

The grebes did most of their diving in a belt of weed about a third of the way out across the lake, at night generally coming closer in shore; in the morning, as signs of life appeared at the farmhouse, working gradually out again. One night they were heard calling at one o'clock. While I did not keep definite records of their feeding hours, they must have had a very early breakfast, for one day between six and seven I found them already resting, and another day, at about half past nine they were diving as for a second meal. Still another day I noted that after nine or ten o'clock there was not much going on, thirty or forty of the birds resting within a radius of a few rods.

In one gathering of forty-five, all apparently grebes, nearly all presented the appearance of gray ovals with white fronts, their long necks laid on their backs. In certain lights the gray ovals looked black, making black spots on the water. As the necks came up, it was interesting to see the dark ovals transformed by the white erect line. When part of a flock was active, an animated picture was presented, alert looking profiles—long sharp bills at right angles to the long neck—pointing some to the right and some to the left, while scattered among those sitting on the water were active divers coming up or going below. "What's that white bird?" was asked, as a turn hid all the black, leaving a beautiful snowy figure; but at another kaleidoscopic turn, perhaps a black bird would have taken its place; while at a certain angle a subtler effect was given, the white grebe almost fading into the gray water. Very long the divers looked when stretched prone on the surface, stretching out a foot and shaking it behind like a flag waved at the end of a boat.

How expertly Aechmophorus dived! Putting its long sharp bill down gently before it, it would part the water and vanish. Sometimes—most astonishing sight—when sitting on the water one would begin to sink below. When nearly

gone it seemed to give a little shake, probably compressing its air sacs to make itself go completely under water. Sometimes it went below so rapidly that in closing over it the water splashed. One that I saw, sank part way and then dived. Occasionally when one went down, the light would sparkle around its body.

It was fascinating to try to count the grebes when part of them were diving. I had to keep moving the glass back and forth, sweeping the surface of the water, watching disappearing and reappearing forms, watching the swimmers which were changing places, and watching closely to count black ducks when they changed into white-throated grebes. A flock of thirty-two were counted one day, most of them black ovals. Who could imagine that those lumpish forms were the exquisite silvery throated creatures of lightness and grace? At one time the black spots seemed to have scattered out into families, groups of four, six, ten, and fourteen swimming by themselves. Some seemed smaller than others, but at my distance I could not be positive that the smaller ones were grebes.

What I took to be a family of eight were by the shore one day, amusing themselves. Two or three of them acting as if they wanted to get up on some of the high stones along the beach, stretched their necks and put their bills up over the tops of the stones, but gave it up as if it were too high a step. One of them playfully leaned down and poked his bill at a brother, when the brother swam ahead out of his reach, leaving a beautiful glittering wake. Two out on the lake stood close together, their heads held high, green weed dangling from their bills. The long streamers seemed hard to manage but by throwing them up by a quick toss of the bill, they were finally disposed of.

After a series of loud grebe calls, as if one had cried, "Here's weed, come on in," parallel lines of white spray showed a party of grebes running splashing over the water, as an interested onlooker from the farmhouse piazza commented, "going some!" One ran splashing for a long ways and then rose and flapped its wings. When another swam, gleaming light broke around its body and its wake behind. Once hearing a *kr'ree, kr'ree,* I looked down and discovered two of the distinguished looking birds moving their heads and necks around. Both rose, as the two others had done before, and, side by side, rushed through the water; after which they dived. Perhaps the bath restored their tempers, for when they came up face to face, they began peaceably preening their feathers.

When watching the grebes through the glass, down the high bluff and off over the lake, focusing on a seated grebe I was given a bewildered feeling of space and moving water by having a gull or tern fly into the disk of the glass and swoop down between me and my bird. Floating between water and sky the white terns and soft gray gulls gave a new sense of motion and depth to the picture.

There was an ever shifting panorama—gulls and black and white terns wandering through the sky, strings of ducks winging their way to some distant point, and black, long-necked cormorants flying low over the water to or from their nesting islands—all serving as background for the silvery-throated grebes which, wherever they appeared on the lake became the center of interest. The note of the white Common Tern was one of the principal sounds in the air, its purring *ter'r'r'r* contrasting with the compelling *kray-kree, kray-kree,* and the high pitched *kree,ee—kr'r'ree-eek* of the grebes. About thirty of

the red-billed black-crowned birds were seen sitting on the edge of a sandspit one afternoon and they were often seen at sunset getting food from the lake and flying off with it in their bills high across the woods in the direction of a large grassy slough where they doubtless had their nests. Bands of Black Terns also passed across toward the slough.

Franklin Gulls, mainly spotty-headed immature, were seen mornings close along shore, wading up to their wings or swimming around in shallow water, dipping down to pick insects off the surface, dipping forward till their heads went under water and their tails tipped up; or, on occasion, standing in front of a pile of foam that had blown in shore, picking daintily from its soft masses. In the afternoons the gulls were generally out on the lake. In sweeping the lake with the glass I would locate the flock of grebes or individuals scattered out over the water by horizontal flashes from the white grebe breast or by the white vertical lines of the neck; while the white lines of the necks of the gulls, sometimes found swimming around in such close neighborhood that they had to be differentiated from the grebes, were shorter and wider; moreover, the gulls, riding high with wings tight at their sides and tails up at an angle, were always veering around as if set on sensitive pivots—often making a smeared reflection, they veered so much—while the grebes riding low on the water, their bodies making compact ovals, rode steadily. One black-headed adult gull, acting as if trying to lead out a band of immature, faced them and then turned and swam ahead, looking back as if to make sure that it was followed.

Out among the silver throats one day, a dark duck, apparently a White-winged Scoter, appeared, swimming rapidly through the flock making the grebes turn to look at it. Old ducks and their broods, notably scoters and golden-eyes, occasionally swam up along shore feeding and resting on the stones along our beach, and a Holboell Grebe with one young was seen several times swimming and diving near shore. There was also a solitary red-necked Holboell, probably the father, which, while the white-throated Grebes possessed the lake, 'walked by his lone.' When a King of the Grebes passed near him one day, he lowered his head as if recognizing superiority; but perhaps it was merely the nine point superiority of possession!

Cormorants were often seen singly or in small numbers in the mornings coming from their breeding islands out on the main part of the lake where earlier in the season we had seen some twenty-five of their flat stick nests variously occupied by greenish eggs, skinny emerging nestlings, and larger black velvety young with orange gular pouches, waving black necks for food. During the day cormorants were often seen in our cove—Whipple Cove—below the bluff. Several times, on looking down from my height, to my surprise and amusement, above the surface of the water I saw a pair of great, wide spread black wings, like giant butterfly wings, the droll birds sitting on the water drying them. When they were bathing, I could sometimes hear them splash their wings under water, after which they would rise and flap them in the air, opening them wide, and holding them out, like wired wings on a hat. When they rose to fly they splashed noisily and then with loud flapping, with convex figures—head and tail held low—they would make a wide curve out into the middle of the bay, to get headed for the islands; for though powerful fliers they were sadly lacking in the flexibility and dexterity of wing shown by their white brothers of the air. Seven were seen in line one night, a black file flying high toward their islands, their long pointed wings looking prong-like on their

downward strokes. On they went till they passed out of sight down the lake through the channel between the long slender spits at the mouth of Creel Bay—beautiful spits that, when the sun struck them looked like slenderly pencilled points of gold.

When the ducks and grebes were close along shore, I often went up on the tin roof to see them better. While there, at different times, a family of Chimney Swifts burst out of the chimney and flew around chattering, the roll and *wick-up* of a Flicker came from the third story roof above and two young were seen chasséing and then standing on the ridgepole, their spotted breasts showing against the blue sky; young Baltimore Orioles were heard teasing for food, an Arkansas Kingbird, known as the "yellow breast", passed, and the white-breasted flew by carrying straw; a Wood Pewee returned to its dead branch with a shake of the wings, a young cowbird on the ground opened its bill entreatingly to a sparrow; a White-breasted Nuthatch and a Clay-colored Sparrow called; Song Sparrows, Maryland Yellow-throats, and Warbling Vireos sang; a Goldfinch rollicked by, and a Mourning Dove sped past; while two cuckoos answered each other from the woods either side the house, and a Yellow Warbler flashed yellow over the green lawn.

From the crest of our bluff there was a wide view, not only of the blue and white water of Creel Bay, with its widely curved, wooded coves and its long jutting points; but out beyond the points, south across the main lake to the softly purpled sides of Sully Hill, an old terminal moraine left by the retreating glaciers. Here, appropriately enough, another relic of the past, the buffalo which had roamed the lake shores and all the wide surrounding prairie, killed off in wantonness, was now with elaborate care to be reinstated in a National Park. So too, the Indians, belittled contemporaries of the buffalo, after outliving them and collecting their bones from the prairie, were now, with elaborate care gathered for education at the Industrial School at Fort Totten, at the foot of Sully Hill.

Reminders of the early hunting days of the Sioux and Chippewa were seen at the farmhouse, where there was a pile of stone hammers and hatchets mostly plowed up on the farm. In one of eight large Indian mounds on the place—excavated by the National Museum—I was told that a Burrowing Owl, here at the extreme eastern limit of its range, had nested in an old badger hole. Another bird at its eastern limit, the Magpie, had also been recorded here, two individuals having spent a winter in the barnyard of a neighbor. One of the historic relics of the region was to be seen on the opposite shore of Creel Bay, the skeleton of an old passenger and freight boat used on the lake by one of the earliest settlers when the water reached the site of the present town of Devil's Lake.

Boats were frequently seen going and coming from the Chautauqua dock across the lake, row boats, motor boats and sail boats; and once a short race was seen between two of the pretty white-winged sail boats. When the motor boats, their sides sometimes glistening like the side of a grebe, made their evening trips up the lake, the grebes watched with heads up, heralding their approach with far-reaching alarm calls, and diving and swimming over to our cove out of the way. Sometimes when the boat had retreated the birds would call and swim out again, but boats of any kind filled them with terror; and perhaps that was one reason why they felt safe at night on our undisturbed side of the lake. Near sunset one evening, the light rested on the wooded east-

ern shore of the bay, yellowing the points extending out into the water, while the dark shadows of the trees in our cove gave depth to the picture. A beautiful sight was seen one morning from the crest of the bluff overlooking our cove —a large flock of Franklin Gulls lined up along the shore with the light on them suddenly burst away, gleaming white over the dark water.

Another morning, fog obscured the lake, obliterating the long spit and almost hiding the woods of the opposite shore. At the foot of our bluff was seen the old mother Golden-eye, and near by a Franklin Gull, standing on one foot on a stone preening its feathers, its dimly suggested reflection contrasting with reflections under a clear sky, when the black head of a gull or the white throat of a grebe would be perfectly mirrored. While the lake was hidden, a large flock of Franklin Gulls straggled by close to the house, and others drifted along the shore. A Kingbird giving chase apparently tweaked the feathers of one and made another suddenly veer with a complaining cry. When the fog first melted back from the opposite shore so that the green of its woods and grass, together with the buffy grass of the spit came out, the sun illuminated four white necks so near together that as the birds swam slowly along they were seen as four dots within the circle of my glass, gradually approaching the outer rim, when a mirror-like flash came from the breast of one of the swimmers. Soon six grebes were seen slowly swimming toward the sun with the light high on their throats, after which the second spit came out of the fog and the sky was blue over all.

The purring *ter'r'r'r* of the tern, and the strident *kr'ray-kree, kr'ray-kree* of the grebe were heard, and eighteen spots were counted on the water in the same belt of weed. Later, when the gray water was all a'sparkle, a gray gull sailed about over it, but no black dots could be seen except with the help of the glass. Another time when the water was dark, the grebes were white dots, and white terns flew around projected against the dark background. Once when the lake was still and white, the black pin heads were scattered out well apart over the water. When separated in this way the grebes kept calling to each other, for they are eminently social birds of close colonies. During rain they were also heard calling, and after a stormy night, when they were unusually quiet, I inferred that they had been broken of their rest.

In this Bay of the Grebes, beautiful motion pictures were constantly being thrown on our screen, especially in morning and evening. One night a glorious golden sunset made a water color of the lake, a small herd of cows wading along the opposite shore glowing red in the warm light. Suddenly the wind shifted from south to west, and the wide smooth lake ruffled in streaks that grew into long feathery white plumes. One morning at six o'clock the lake was so calm that the wooded shores of our cove and the opposite side of the lake were reflected so clearly that it was hard to tell which was woods and which reflection. About half the grebes were along our shore, the rest in the smooth water along the other side of the lake where they were white spots with short lines behind them. As the nearer ones swam, the line turned to the full wedge of the wake. One near shore was reflected charmingly, every move of its long-billed head and silvery throat being mirrored.

There was another morning of exquisite reflections and delicate water effects. Four long-billed, long-legged sandpipers were running along shore in duplicate, one very small one trotting off, as if in apology, in the opposite direction. A cormorant flew, closely mirrored in the lake. The sun flashed from

the silvery throat of a grebe. Whenever a bird moved on the water, he started a series of circles. The Franklin Gull, pivoting around, made a series of circular ripples, while a diving grebe made a double series, one set for body, one for bill. A grebe was also seen riding with concentric rings ahead of it.

When my week on the lake was over, I realized what would be the delights of a close intimate study of a nesting colony of these original birds; for while my study had been a long distance one, it was enough to fill me with enthusiasm for the rarely beautiful birds—the Grebes of the Silvery Throats.

(*To be continued*)

SOME OCEANIC BIRDS FROM OFF THE COAST OF WASHINGTON AND VANCOUVER ISLAND

By STANTON WARBURTON, JR.

WITH ONE PHOTO

DURING the summer of 1917 the writer, through the courtesy of Mr. E. A. Kitchin of the Glacier Fish Company, was able to take a trip on one of the company's halibut fishing boats. One week, from June 26 to July 3, 1917, was spent fishing on the Pacific Ocean off the coast of the state of Washington and Vancouver Island. As I had very few duties connected with the boat's routine, most of my time was spent in observing and collecting birds. The boat was a gasoline launch about sixty feet long, with accommodations for ten people. One day was spent opposite Grays Harbor, Washington, and the rest of the time in the vicinity of Vancouver Island. The boat carried a liberal supply of ice in which the fish were kept, which made it possible to take good care of the specimens collected. Luckily the weather was excellent, so good in fact that all birds shot were very easily picked up.

The captain, Joe Magher, was very much interested in the work and did all in his power to make the trip a success. Many of the specimens could not have been secured but for the interest he took and the trouble he went to in collecting them. The crew also were always ready to help me in any way, and went to considerable pains to keep my specimens on ice.

On Tuesday morning, June 26, we left Tacoma, and arrived at Cape Flattery, Washington, on the morning of the next day. Here the Tufted Puffins (*Lunda cirrhata*) were very common and exceedingly tame. The presence of the boat did not seem to bother them in the least; in fact, most of the time they only swam out of its immediate path. The California Murre (*Uria troille californica*) was also quite common, but not as much so as the Puffins. The California Murres were always seen in pairs; one pair was collected.

On Thursday, June 28, about thirty miles west of Grays Harbor, a pair each of the Sooty Shearwater (*Puffinus fuliginosus*) and Pink-footed Shearwater (*Puffinus creatopus*) were collected. Both species were quite common about here, many flocks of each being seen; but perhaps there were more Sooty Shearwaters than Pink-footed. While in flocks they seemed rather wary, but when single birds were encountered they were very tame. They were feeding on the fish which the fishermen left as worthless, these fish, caught at a great depth, be-

ing unable again to reach the bottom. On this date I collected a specimen of the Skua (*Megalestris skua*), taken while eating a dead rock cod which was floating on the surface. About six of these birds were seen during the day. The captain, who is a keen observer, said that this was the third time in eleven years of fishing in this locality that he had seen them. He described the species to me at the

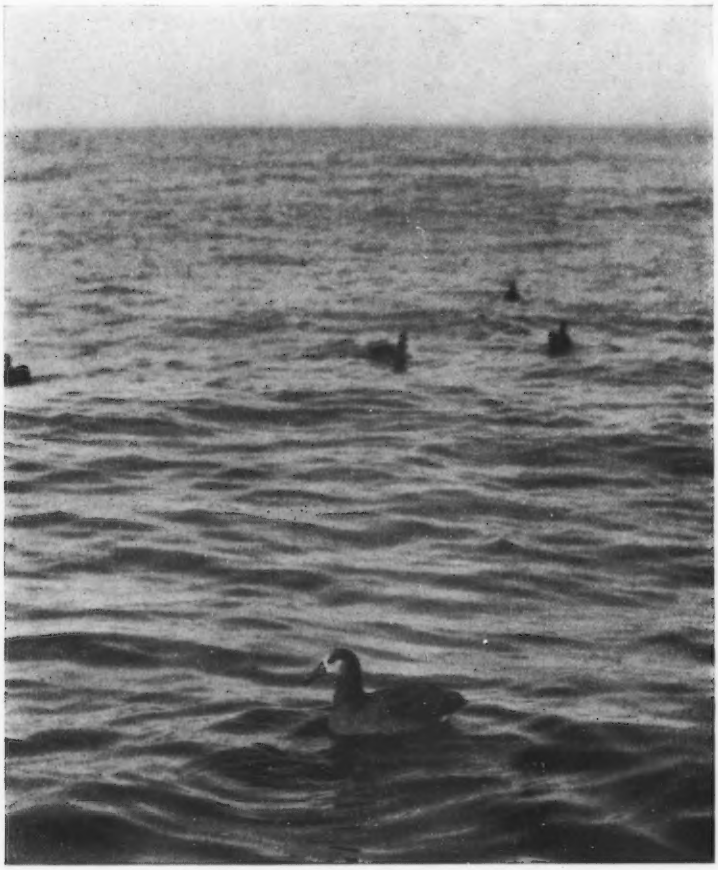


Fig. 34. BLACK-FOOTED ALBATROSSES PHOTOGRAPHED OFF THE COAST OF WASHINGTON.

start of the trip, calling it the "strange bird", and the rarest bird in that locality.

While not of a strictly ornithological nature it may be of interest to note that on this date a school of the Alaska Fur Seal were observed playing quite close to the boat . One Black-footed Albatross (*Diomedea nigripes*) was seen on this date.

The next day, Friday the 29th, our location was shifted to the fishing grounds opposite Vancouver Island. Here a pair of Common Tern (*Sterna hirundo*) and also a pair of Tufted Puffin were collected. The Terns were a pleasant surprise, appearing suddenly while the captain and myself were talking on the front deck. After the first bird was shot the other turned around and came back, making it possible to collect this one also. The Black-footed Albatross was very common on this date, and in fact until we left two days later. A few Cassin Auklets (*Ptychoramphus aleuticus*) were seen here. They were all in pairs and very tame, but were seen at a time when it was impossible to collect them.

On Saturday I woke up to find the captain laughing at me, as he had just shot two Skuas and an albatross and the shots had not awakened me. I admitted the joke but took the first dory and hastened to get the birds. Before I could return the captain had another Black-footed Albatross dead in the water. Although this bird was shot at very close range it was made into a good specimen. While retrieving these birds I got so close to an albatross that I raised the oar to see if I could collect him in this manner, but before the fatal blow could descend the bird lazily arose and flew about twenty-five yards, where he sat, wondering what kind of tactics these were. That afternoon three Fork-tailed Petrels (*Oceanodroma furcata*) were collected. The albatrosses were so plentiful and tame here that in the afternoon I made a few attempts to photograph them.

On Sunday I went out in a dory while the fishermen pulled in their gear. The albatrosses did not seem to have any fear of the dory, as they often came to within ten or fifteen feet of me, sitting in the stern. Here I got my best picture (see fig. 34) of them as they followed the dory to get the fish which the fishermen would leave floating. Occasionally two birds would claim the same fish and then there would be a tug-of-war, the victorious bird swimming to one side to eat it, while the other would follow the dory, hoping that the next fish would be his. The flight of the albatross, as I observed it, was very low, mostly sailing; indeed, I can think of no instance where I saw them over fifty feet above the water. Occasionally, while sailing, one would drag the very tip end of a wing through the crest of a wave without seeming to affect his balance. Sometimes a bird would fly so low in the trough of a wave that it would be lost from sight for an instant.

On Monday, July 2, running out of bait, we started for Tacoma, arriving there on the afternoon of July 3. For the identification of both the Pink-footed Shearwater and the Skua I am indebted to Mr. H. S. Swarth of the Museum of Vertebrate Zoology, who kindly determined them for me. The others, about which there can be no doubt, were identified by Mr. J. H. Bowles, of Tacoma, and Mr. D. E. Brown, of Seattle. The skins taken on this trip are mostly in the collections of Mr. Brown and myself.

Tacoma, Washington, February 28, 1918.

DESCRIPTION OF A NEW SUBSPECIES OF *CYANOLAEMUS CLEMENCIAE*

By HARRY C. OBERHOLSER

EXAMINATION of the series of *Cyanolaemus clemenciae* in the Biological Survey collection some time since disclosed the existence of a hitherto unrecognized subspecies. Further comparison with the other material in the United States National Museum now confirms the distinction first noted, which, it is but fair to state, Mr. Outram Bangs had independently discovered. Learning, however, of the present writer's investigations, he courteously volunteered to relinquish his claim. Since the northern race of this species proves to be without a name, it may be called

Cyanolaemus clemenciae bessophilus, subsp. nov.

Chars. subsp.—Similar to *Cyanolaemus clemenciae clemenciae*, but bill shorter; male with upper parts duller, particularly on the rump, which is more washed with grayish; lower surface decidedly paler; and throat duller. Female duller above and paler below than the female of *Cyanolaemus clemenciae clemenciae*.

Description.—Type, adult male, no. 140247, U. S. Nat. Mus.; Fly Park, Chiricahua Mountains, Arizona, June 8, 1894; A. K. Fisher. Pileum brownish olive, with a grayish tinge and a greenish metallic sheen, the forehead lighter; nape and back metallic oil green, the nape anteriorly and the back posteriorly somewhat bronzy; rump and the shorter upper tail-coverts, metallic Saccardo's olive, the feathers tipped narrowly with pale brownish gray; longer upper tail-coverts, and the tail-feathers, bluish black, becoming more brownish on the outer rectrices, the two outermost pairs broadly tipped with white; wings, including the greater and primary coverts, chaetura drab, with a purplish sheen; lesser wing-coverts metallic green, like the back; median wing-coverts chaetura drab, edged with dull metallic green, similar to that of the back; a short superciliary stripe dull white; a broad postocular streak, practically continuous with the superciliary stripe, white; sides of head and neck between fuscous and hair-brown, the latter glossed with the metallic green of the back; narrow rictal streak dull white; throat and chin metallic blue, between Vanderpoel's blue and Blanc's blue; breast and abdomen rather light brownish gray, the breast washed with metallic greenish, the abdomen lighter and more clearly gray; sides and flanks of the same color, but slightly washed with metallic bronzy greenish; flanks with a small tuft of pure white feathers; under tail-coverts mouse gray, tipped with dull white; axillars dull gray; under wing-coverts dull green like the back, but somewhat duller; edge of the wing narrowly pale brownish white.

Measurements.—Male:[1] wing, 72-78.5 (average, 76.1) mm.; tail, 44.5-48.5 (45.8); exposed culmen, 21.5-23 (22.2).

Female:[2] wing, 69.5 mm.; tail, 41-43.5 (average, 42.3); exposed culmen, 23.5-24.5 (24).

Geographic distribution.—Southwestern United States and Mexico. Breeds north to the Santa Catalina, Chiricahua, Huachuca, and Santa Rita mountains in southeastern Arizona; the San Luis Mountains in southwestern New Mexico; and the Chisos Mountains in central western Texas; and south to the Sierra Madre of the State of Chihuahua, Mexico. Winters south to southeastern Mexico (Vera Cruz).

Remarks.—This interesting new subspecies reaches apparently its greatest differentiation in Arizona and southwestern New Mexico. Birds from the Chisos Mountains in central western Texas show in some specimens a tendency toward typical *Cyanolaemus clemenciae clemenciae*, but are decidedly referable to *Cyanolaemus clemenciae bessophilus*. A single male from Guadalupe y Calvo, in the Sierra Madre, Chihuahua, Mexico, is intermediate, but is apparently nearer the northern race. This hummingbird is but a summer resident in the United States, and therefore undoubtedly winters in Mexico. Evidence of this is a specimen from Mirador, Vera Cruz.

The type locality of *Cyanolaemus clemenciae* Lesson,[3] as given in the original description, is Mexico, and the bird described is evidently the form breeding in central and southern Mexico. The bird introduced as *Trochilus topiltzin* by De la Llave[4] refers also to the same race, so that the bird from Arizona is the one entitled to a new name.

This division of *Cyanolaemus clemenciae* into two races restricts the distribution of *Cyanolaemus clemenciae clemenciae* to the area in northeastern, central, and southern Mexico extending north to central Nuevo Leon, Zacatecas, and Durango; west to Jalisco; south to Michoacan and Oaxaca; and east to Vera Cruz.

Millimeter measurements of both races are added herewith for purposes of comparison.

[1]Ten specimens, from Arizona and New Mexico.
[2]Two specimens, from New Mexico.
[3]Hist. Nat. Ois.-Mouch., 1829, pp. xlv, 216, pl. LXXX.
[4]Registro Trimestre, II, no. 5, January, 1833, p. 49 (Mexico).

MEASUREMENTS OF SPECIMENS OF CYANOLAEMUS CLEMENCIAE CLEMENCIAE

Museum and No.	Sex	Locality	Date	Wing	Tail	Exposed culmen
U. S. N. M. 155230	♂	Nahuatzin, Michoacan, Mexico	Oct. 8, 1892	79	50	24.5
U. S. N. M. 155231	♂	Nahuatzin, Michoacan, Mexico	Oct. 8, 1892	78	47	24.5
U. S. N. M. 155232	♂	Patzcuaro, Michoacan, Mexico	July 23, 1892	78	47	24.0
U. S. N. M. 185206	♂	Mt. Tancitaro, Michoacan, Mexico.	Feb. 26, 1903	76.5	49	24.0
U. S. N. M. 155233	♂	Las Vegas, Vera Cruz, Mexico	June 11, 1893	78.5	50	23.0
U. S. N. M. 155226	♂	Cerro San Felipe, Oaxaca, Mexico	Aug. 23, 1894	79	49	23.7
U. S. N. M. 128525	♂	Cuernavaca, Morelos, Mexico	Sept. 24, 1892	73	46.3	23
U. S. N. M. 155229	♂	Huamantla, Tlaxcala, Mexico	May 13, 1893	79.5	50.5	23.7
		Average of eight males		77.7	48.6	23.8
U. S. N. M. 155227	♀	Cerro San Felipe, Oaxaca, Mexico	Aug. 23, 1894	68.5	43.5	25.7
U. S. N. M. 155228	♀	Barranca Ibarra, Jalisco, Mexico	May 13, 1892	69.5	44	27.7
		Average of two females		69	43.8	26.7

MEASUREMENTS OF SPECIMENS OF CYANOLAEMUS CLEMENCIAE BESSOPHILUS

Museum and No.	Sex	Locality	Date	Wing	Tail	Exposed culmen
U. S. N. M. 130554	♂	East side of San Luis Mountains, Mexican Boundary Line, New Mexico	June 25, 1892	76.5	45.5	22.5
U. S. N. M. 130553	♂	West side of San Luis Mountains, Mexican Boundary Line, New Mexico	July 12, 1892	75	45	22
U. S. N. M. 130555	♂	West side of San Luis Mountains, Mexican Boundary Line, New Mexico	July 11, 1892	77	44.5	22
U. S. N. M. 140247	♂	Fly Park, Chiricahua Mountains, Arizona[5]	June 8, 1894	76.5	46	22
U. S. N. M. 140245	♂	Chiricahua Mountains. Arizona	June 7, 1894	76.5	46	23
U. S. N. M. 140246	♂	Chiricahua Mountains, Arizona	June 7, 1894	76.5	44.5	21.5
U. S. N. M. 140244	♂	Chiricahua Mountains, Arizona	June 10, 1894	75.5	47	21.8
U. S. N. M. 140248	♂	Fly Park, Chiricahua Mountains, Arizona	June 8, 1894	77	48.5	22.5
U. S. N. M. 140249	♂	Chiricahua Mountains, Arizona	June 9, 1894	72	44.5	22.5
U. S. N. M. 140250	♂	Chiricahua Mountains, Arizona	June 11, 1894	78.5	46.5	22
		Average of ten males		76.1	45.8	22.2
U. S. N. M. 130557	♀	East side of San Luis Mountains, Mexican Boundary Line, New Mexico	June 26, 1892	69.5	41	23.5
U. S. N. M. 130556	♀	West side of San Luis Mountains, Mexican Boundary Line, New Mexico	July 12, 1892	69.5	43.5	24.5
		Average of two females		69.5	42.3	24

[5]Type.

Washington, D. C., July 4, 1918.

SOME SUMMER BIRDS OF ALERT BAY, BRITISH COLUMBIA*

By P. A. TAVERNER

DURING the summer of 1917, being enroute to Prince Rupert from Vancouver and having a few days to spare, I inquired as to the best available stopping place along the coast of Vancouver Island north of Comox, the northernmost station where systematic collections have been made on the Island. Alert Bay seemed the place most easy of access and here I arrived August 9 and collected industriously until the 15th.

Alert Bay is an Indian village situated on Cormorant Island, opposite the mouth of the Nimkish River off the northeast shore of Vancouver Island near the head of Johnstone Strait. Just to the north is Malcolm Island and beyond lie the waters of Queen Charlotte Sound. Cormorant Island is about five miles long and less than a mile wide. Down its center runs a rocky ridge, badly burned along its crest, but clothed with heavy timber along the shores. The village itself is situated around the bend of the bay, on the west side of the island and facing the main steamer channel and Vancouver Island opposite, about two miles away. It is a characteristic west coast Indian village of community houses and carved totem poles, fringing a board walk just back of a bouldery beach encumbered with rotting canoes, boats and garbage. Behind rise the bare, steep and stony sides of the backbone of the island. At either end of the Indian village are a few homes of a small white population, the Indian agent, missionary and those engaged in the salmon cannery or the saw mill, which are the only organized industries. Beyond the row of houses and still along the shores at either hand, the dense evergreen timber comes down to high water mark. The bush is all but impenetrable. On the slopes dense growths of moss, ferns and underbrush conceal treacherous, loosely piled boulders. Over this is laid a mass of fallen timber of large size which has to be climbed over, with unexpected pitfalls on the other side hidden by the rank damp vegetation. Through this rise great straight trunks of evergreens reaching fifty feet or so without a branch and continuing upward one to two hundred feet. The burnt ridge forms practically the only clearing on the island and this is so generally gridironed with fallen stuff as to be heart breaking to the collector. A path across the island, after climbing a break in the ridge, descends to low ground where it assumes the aspect of a canyon through the densest kind of deciduous and evergreen brush. There is a wide, sandy beach on the east side of the island. There are no farms of any kind. A few white inhabitants have small kitchen gardens immediately adjoining their houses, and an attempt had been made to plant a patch of potatoes amidst the bracken on a comparatively clear spot on the ridge, while three or four cows picked a living from between the fallen timber in a limited area adjoining.

Across on Vancouver Island the mouth of the Nimkish River opens into a wide bay revealing great stretches of seaweed-covered mud flats at low tide. The bush is heavy, as described about Alert Bay, and only to be traversed along old grown-up logging tracks or by the disused logging railroad that leads back five miles to Nimkish Lake. Small clearings exist in the neighborhood and there is a considerable amount of local slashing and old clearing so grown up with underbrush as to be impassable without a brush hook except by infinite exertion and patience.

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It is easy to see that collecting in such country is discouraging, especially during mid-molting season when birds are at their quietest. Occasional glimpses of small land birds were observed as they disappeared in the tangle where it was hopeless to follow them or from whence when shot they could not be retrieved. An occasional bird peeped on either hand along the trail and could not be further investigated. High overhead one might be aware of numbers of small birds darting about the branches, but at such range that they were usually safe from everything but a rifle.

I spent a few hours in various directions about the village of Alert Bay trying to discover some practicable ground but without avail. A couple of trips were made to the mouth of the Nimkish River, and once along the railroad to Nimkish Lake. Most of these trips were practically blank. The most productive work was on the waters of Alert and Nimkish bays. The list of birds seen or collected is not large, but as little has been published about sections hereabouts I present it for record.

1. **Colymbus holboelli.** Holboell Grebe. Three in bright red-necked plumage seen off the east coast of the island.

2. **Gavia immer.** Common Loon. Several loons seen every day, usually adults with two or three immatures.

3. **Brachyramphus marmoratus.** Marbled Murrelet. Three or four murrelets seen constantly in the bay. One noted from the cannery wharf was still in nuptial plumage, but the remainder of those seen and two taken were birds of the year.

4. **Cepphus columba.** Pigeon Guillemot. A few constantly present on the bay. All seen were in full black and white plumage. None could be taken.

5. **Larus glaucescens.** Glaucous-winged Gull. Large numbers of Glaucous-winged Gulls were seen on the bay and on the tidal flats at the mouth of the Nimkish River. All plumages seemed present and an adult and a bird of the year were taken.

6. **Larus argentatus.** Herring Gull. A number of Herring Gulls were seen about the mouth of the Nimkish River. The majority were in various stages of juvenility. One seeming adult was taken but when in hand it proved to be not quite mature in plumage. On dissection it turned out to be a non-breeder. There are two types of coloration among the British Columbia Herring Gulls. One has the black of the wing tips restricted and lightened to almost gray, approaching the *glaucescens* type and described by Brooks[1] as *Larus thayeri;* the other has blue-black wing tipping and averages a larger amount of white specula and pattern than is shown by Atlantic birds. All intermediates exist, substantiating Dr. Dwight's[2] conclusion that *thayeri* is a subspecies of *argentatus* and the Pacific coast representative of that species. Until separate breeding grounds for these two types are discovered the logical conclusion is that *Larus argentatus thayeri* is a highly variable or perhaps a dichromatic form.

7. **Larus brachyrhynchus.** Short-billed Gull. Very common, dividing the honors in numbers with the Heermann Gull. Four specimens were taken, showing as many stages in plumage. No. 10930 is a bird of the year, very similar to the comparable stage of the Herring Gull, with dark bill, flesh-colored feet and hazel iris. No. 10922 seems to be a year older and intermediate between the last and the next; the grays are suffused with fuscus tints, it has a heavy tail bar, and the dark primaries are without pattern. The bill is dark with light greenish base, legs olive gray and the iris silvery. No. 10920 presumably shows a succeeding plumage. The mantle is pure gray with just traces of fuscous on secondaries, while the primaries are black with definite white pattern, and the tail bar is nearly lost. The dark about the head is deeper in color than in the previous bird, but sharper in detail and less suffused. Most of the plumage is fresh while the previous specimen is much worn. The soft parts are similar to the last. No. 10931 has apparently just molted into the adult winter plumage and has but a few scattered feathers of the immature. It is at least a year older than the preceding. The bill is light yellow slightly greenish at base, with red gape. The legs are yellowish olive and the iris hazel. This last item is peculiar, for unless these specimens are abnormal they

[1]Bull. Mus. Comp. Zool., LIX, no. 5, 1915.
[2]Auk, XXXIV, 1917, pp. 413-414.

indicate that the iris changes from hazel in the young to silver in the immature and back again to the original hazel in the adult. It thus seems that the Short-billed Gull is not mature until after its third winter at least.

8. **Larus heermanni.** Heermann Gull. Very common. All plumages seemed to be present, though birds of the year were scarce. Five specimens were taken, all in worn and molting condition. I have not a sufficient series to work out the ages, but suspect that some of them are just taking on the first adult winter plumage. In summer, Herring Gulls divide into breeding and non-breeding communities, the latter consisting mostly of juveniles approaching maturity and a few subnormal adults. These Heermann Gulls summering far north of their breeding grounds are probably of this type.

9. **Puffinus griseus** (sp?). Shearwater. On the east side of Cormorant Island I saw two shearwaters beating and wheeling along the shore. Enroute from Alert Bay to Prince Rupert, in Queen Charlotte Sound, I saw from the ship a number of similar gray birds. None came close enough for specific determination and I include them under this species hypothetically.

10. **Nettion carolinensis.** Green-winged Teal. Two juvenile males were taken in the lower stretch of the Nimkish River.

11. **Mergus** sp?. Merganser. A couple of juvenile or female mergansers were seen in the channel between Vancouver and Cormorant islands but could not be specifically identified.

12. **Oidemia deglandi.** White-winged Scoter. Seen several times flying up or down the main steamer channel.

13. **Branta canadensis.** Canada Goose. A flock noted flying up the main steamer channel.

14. **Ardea herodias.** Great Blue Heron. Quite a number seen at low tide on the flats about the mouth of the Nimkish River.

15. **Ereunetes mauri.** Western Sandpiper. Flocks containing several hundred small sandpipers were seen on the flats at the mouth of the Nimkish River, and a few smaller groups on the beach in front of Alert Bay. All taken were typical *mauri*.

16. **Ægialitis semipalmata.** Semipalmated Plover. One specimen, a juvenile, was shot from a flock of Western Sandpipers at the mouth of the Nimkish.

17. **Bonasa umbellus.** Ruffed Grouse. Two seen along the logging railroad between the mouth of the river and Nimkish Lake. A day or so later a prospector going over the same ground saw a dozen or more. The only bird taken is a female and typical *sabini*.

18. **Dendragapus obscurus.** Blue Grouse. Said to occur on Vancouver Island opposite, but not noted by me.

19. **Lagopus** (sp?). Ptarmigan. Ptarmigan are said to occur at some elevation on Vancouver Island opposite. Fannin[3] only gives *rupestris* without verifying evidence for Vancouver Island, and Swarth[4] *leucurus* on specimens taken.

20. **Columba fasciata.** Band-tailed Pigeon. Two seen in the high tree tops in the slashings near the mouth of the Nimkish River.

21. **Haliæetus leucocephalus.** Bald Eagle. Quite common along the whole coast traversed by daylight from Vancouver to Alert Bay. This includes from near Comox northwards. They were often noted sitting on floating debris out in mid-channel. About the mouth of the Nimkish River they were very numerous and came to feed on the exposed mud flats, being seen in adjoining trees waiting for the water to fall. It is indicative of the height of this comparatively moderate sized timber, that while straight below birds that were still some distance from the extreme top I was repeatedly unable to reach them with heavy charges of no. 1 shot from a twelve gauge gun.

22. **Falco columbarius.** Pigeon Hawk. One taken near the mouth of the Nimkish. This proves to be a juvenile, and is so much darker than comparable eastern birds that I have little hesitancy in referring it to *suckleyi*. Another seen flying behind the village of Alert Bay was so obviously black that I include it under the same form.

23. **Otus asio.** Screech Owl. Several nights at Alert Bay I was serenaded by what I took to be a screech owl. The tremolo was similar to that of our eastern birds

[3]Catalogue British Columbia Birds, Francis Kermode, Provincial Museum, Victoria, B. C., 1904.

[4]Univ. Calif. Publ. Zoology, vol. 10, no. 1, 1912.

but differed sufficiently to rouse a slight doubt as to its identity. It was shorter and of different quality, at times suggesting the laugh of the Loon but shorter and softened. Probabilities refer it to *kennicotti*.

24. **Ceryle alcyon.** Belted Kingfisher. Very common along all shores.

25. **Dryobates villosus.** Hairy Woodpecker. This species was identified by its notes once or twice, but the bird could not be seen.

26. **Phloeotomus pileatus.** Pileated Woodpecker. Heard several times and seen once in heavy timber adjoining the village.

27. **Colaptes auratus** (sp?). Flicker. Heard in the distance several times about the village but not seen.

28. **Selasphorus rufus.** Rufous Hummingbird. Common about the flowers in the small gardens in the village.

29. **Cyanocitta stelleri.** Steller Jay. Common in the slashings near the mouth of the Nimkish, and seen several times in the deep woods along the railroad to Nimkish River. All taken are *stelleri*, but the black on the back is sootier than is shown by our other specimens from farther south on the island.

30. **Perisoreus canadensis.** Canada Jay. Said to be common at higher elevations in adjoining parts of Vancouver Island, but not seen personally. *P. c. obscurus* seems to be the form occuring on the island farther south.

31. **Corvus corax.** Raven. Said to occur rather commonly. Several times I thought I heard its hoarse voice but could not locate the croaker.

32. **Corvus caurinus.** Northwest Crow. Very common along all shores. The Crows and the tide perform the office of garbage collector at Alert Bay. Practically all the household refuse is thrown on the beach. The crows are absurdly tame and shortly the little they leave is washed away by the incoming and retreating tide.

33. **Agelaius phoeniceus.** Red-winged Blackbird. I heard circumstantial accounts of this bird's occurrence on Nimkish Lake, though on my short visit there I did not discover it.

34. **Melospiza melodia.** Song Sparrow. The only sparrow seen and not very common or so retiring in the molting season as to be seldom seen. They inhabited the densest tangles in the slashings and could rarely be induced to come out where there was a chance of finding them after shooting. Three juveniles were secured. In spite of their ragged and juvenile condition I refer them to *rufina*.

35. Swallows. No swallows of any species were seen, though all the residents spoke of them nesting about their sheds and buildings. In the face of a nearby clay cliff I noted a number of holes that looked like the work of Bank Swallows.

36. **Bombycilla cedrorum.** Cedar Waxwing. One specimen taken on top of the ridge behind the village.

37. **Nannus hiemalis.** Winter Wren. Fairly common in the densest brush but so retiring as to be seldom seen, and when shot almost impossible to find. Only one was secured, a richly colored red bird that I refer to *pacificus*.

38. **Penthestes rufescens.** Chestnut-backed Chickadee. The commonest land bird present. Parties of from four to ten were seen almost everywhere, from the dense shade of the logging road to Nimkish Lake to the open sunlight of the burnt ridge tops.

39. **Regulus** (sp?). Kinglet. A few seen in the high tree tops, but too far up and in too poor light for identification. Individuals that momentarily dropped low enough were shot, but invariably caught in the spreading fronds of the evergreen branches and could not be retrieved.

40. **Planesticus migratorius.** Robin. Several seen about the village.

Geological Survey, Ottawa, Canada, April 5, 1918.

FROM FIELD AND STUDY

Second Occurrence of Wilson Plover in California.—While strolling on the ocean shore at Imperial Beach, San Diego, County, California, May 11, 1918, examining with the aid of glasses various waders, I discovered a Wilson Plover (*Ochthodromus wilsonius wilsonius*) and three Snowy Plovers engaged in feeding along the wave-swept beach. They all took flight, circled around over the breakers and settled on the wet sand at the edge of the water. The Wilson Plover permitted me to approach to within some fifty feet, then running rapidly would catch up with its more timid companions which had earlier moved out of possible danger. Similar acts were repeated a number of times; it then took the lead, uttered a few notes and flew in the direction of the original feeding place. On disappearing from sight, I retraced my steps nearly a quarter of a mile, and there, not a hundred feet from where they first flew, on a dry portion of the beach, the Wilson was seen standing on the sand-drift. Its associates were close by. Two of them claimed ownership to a set of three eggs; the other appeared greatly disturbed when I examined a shell-lined hollow in the sand. Suspecting that the Wilson might have a brooding mate, I withdrew to watch from a distance, but as I did so, the bird gradually approached nearer. When I stopped, it would also stop and remain motionless. If I advanced too near, it would retreat, keeping the distance between us at all times the same or about so. This peculiar action was too trying for me, so I decided to give up temporarily the hunt for its nest.

On June 16, I searched the beach carefully without seeing a bird of this species. All further attempts to locate this Wilson Plover were frustrated by the U. S. Government; for on my next visit to this locality, the beach and the road leading to it were placarded with large wooden signs, reading "Danger: U. S. Aerial Gunnery Range."

So far as I can learn, this is the only Wilson Plover seen in the state since the species was added to the list of the birds of California through the record of a male taken by myself at Pacific Beach, June 29, 1894 (Nidiologist, II, May, 1895, p. 87).—A. M. Ingersoll, *San Diego, California, August 4, 1918.*

Heermann Gull With White Primary Coverts.—Mr. Willett's note regarding the occurrence of white primary coverts in *Larus heermanni* (Condor, XX, May, 1918, p. 122), suggests the advisability of recording a similar specimen in the Museum of the Geological Survey of Canada. This bird is a female in worn changing plumage, probably just coming into maturity, taken August 14, 1917, at Alert Bay, B. C., off the northeast coast of Vancouver Island. Four outer primary coverts on one wing and two on the other are pure white. The dissimilarity is probably due to molt. Of a hundred or more gulls of this species observed at the same time and during several successive days this was the only one noted that showed these conspicuous white wrists in flight, and it was collected on that account. It is difficult to offer a satisfactory explanation to this sporadically (?) recurring variation.—P. A. Taverner, *Museum Geological Survey, Ottawa, Ontario, August 10, 1918.*

Pacific Coast Records of the European Widgeon.—Fifty years ago Dr. J. G. Cooper published the first note on the presence of the European Widgeon (*Mareca penelope*) on the Pacific Coast. Since then, reports of the capture of this species have appeared from time to time, the most recent being that of Mailliard in The Condor for last May, relative to specimens secured in 1908 and 1917. The records of the occurrence of the European Widgeon in America now number more than a hundred, of which nearly twenty percent are based on specimens taken on the Pacific Coast. The Alaska and British Columbia records have been published several times and need not be repeated here. The Washington records are all recent and are due to the energy of Bowles and Warburton who have reported one record for each winter since 1915. So far as I am aware Oregon is not yet represented by any notes on this species. The California list includes at least eleven records, representing a dozen or more specimens and is exceeded only by that of North Carolina. Most of the California records are mentioned in Grinnell, Bryant and Storer's "Game Birds of California" (in press), but the data of the California and Washington

specimens are not to be found in any one place and therefore it may be convenient to recapitulate them all briefly in the order in which the birds were collected.

CALIFORNIA

(1) 1868. San Francisco market. Several specimens. Cooper, Proc. Calif. Acad. Sci., IV, 1868, p. 9.

(2) 1882, February 17. San Francisco market. Specimen no. 542 in the Bryant collection. W. E. Bryant, Forest and Stream, XXVI, June 24, 1886, p. 426.

(3) 1884, winter. Eureka, Humboldt County. Specimen shot by Charles Fiebig and now in the Eureka Public Library. Townsend, Auk, III, 1886, p. 491; Proc. U. S. Nat. Mus., X, 1887, p. 184.

(4) 1884. Rio Vista, Solano County. Two specimens [in collection of F. H. Holmes, obtained in San Francisco market January 25 and February, 1884]. Belding MS, quoted by Grinnell, Pac. Coast Avifauna, no. 11, 1915, p. 33.

(5) 1890, November 24. San Francisco Bay. Specimen no. 124,776, U. S. Nat. Museum, collected by C. H. Townsend.

(6) 1904, February 16. Bixby, Los Angeles County. Specimen shot by C. H. Mears on the Pasadena Duck Club preserve and formerly owned by Joseph Welsh of Pasadena. Now in the Grinnell collection. Grinnell, Auk, XXI, 1904, p. 383.

(7) 1905, February 5. Bixby, Los Angeles County. Specimen shot by Robert Erskine Ross on the same marsh in which the Welsh specimen was obtained. Ross, Forest and Stream, LXIV, Feb. 25, 1905, p. 153.

(8) 1905? Eureka. Specimen in collection of Dr. F. H. Ottmer of Eureka. F. J. Smith MS, quoted by Grinnell, Bryant and Storer, "Game Birds Calif". (in press), p. 112.

(9) 1908, December 5. Merced County. Specimen in California Academy of Sciences, collected by Rollo H. Beck. Jos. Mailliard, Condor, XX, May, 1918, p. 122.

(10) 1911, October 20. Arcata Bay, Humboldt County. Specimen shot by Alden Trott. F. J. Smith MS, quoted by Grinnell, Bryant and Storer, "Game Birds Calif". (in press), p. 112.

(11) 1917, December 19. Norman, Glenn County. Specimen belonging to the Zindo Gun Club, shot by Samuel Pond of San Francisco, and now in the office of Drs. C. H. Bell and E. Pitres of that city. Jos. Mailliard, Condor, XX, May, 1918, p. 122.

WASHINGTON

(1) 1915, January 12. Nisqually Flats, Thurston County. Specimen shot by L. W. Brehm of Tacoma. Bowles, Condor, XVII, Mar., 1915, p. 102; ibid., XVIII, May, 1916, p. 129.

(2) 1916, January 15. Nisqually Flats. Specimen shot by Mr. Ditz of South Tacoma and now in the Bowles collection, Tacoma. Bowles, Condor, XVIII, May, 1916, p. 129.

(3) 1917, March 31. Nisqually Flats. Specimen collected by Stanton Warburton, Jr., and now in the Warburton collection, Tacoma. Warburton, Condor, XIX, July, 1917, p. 142.

(4) 1918, January 13. Nisqually Flats. Two adult males brought in to Edwards Bros. of Tacoma for mounting. Bowles, Condor, XX, Mar., 1918, p. 93.

The California records include three birds from Humboldt Bay, three from San Francisco Bay, two from Bixby, Los Angeles County, and one each from three interior localities: Merced County; Rio Vista, Solano County; and Norman, Glenn County. So far as shown by the dates which have been recorded, the birds were shot during the four months from October 20 to February 17. Several of them are now preserved in public museums: The Bryant specimen should be in the Oakland Museum, the Fiebig specimen is in the Public Library at Eureka, the Townsend specimen is in the National Museum, and the Beck specimen in the museum of the California Academy of Sciences.

The five Washington specimens were all obtained on the Nisqually Flats, near Olympia, and were collected between January 12 and March 31. At least two are in the collection of J. H. Bowles and one is in that of Stanton Warburton, Jr.

All the birds enumerated in the above lists were males. The difficulty of distinguishing the females of *Mareca penelope* and *Mareca americana* probably explains why more females of the former species are not recognized in the field and saved. Cooperation on the part of sportsmen will doubtless bring to light other specimens and show that the European Widgeon occurs more frequently than is generally supposed. So far as practicable the present location of all recorded specimens should be ascertained and as many as possible of them should be placed in public museums where they may be properly and permanently preserved.—T. S. PALMER, *Washington, D. C., June 2, 1918.*

An Albino Magpie.—An Albino Magpie (*Pica pica hudsonia*) was observed by the writer near the Teton River, a few miles above Collins, Montana, on July 20, 1918. It was associated with others of its species, and flew across the road, in front of me, to alight on a fence post where it sat "singing" the characteristic magpie notes. It was entirely of a grayish-white, or very pale gray color, and did not exhibit any definite markings so far as I was able to discern.—A. D. Du Bois, *Dutton, Montana, August 12, 1918.*

New Records for Some of the Islands off the Coast of Southern California.—Through the courtesy of the State Fish and Game Commission of California an expedition from the California Academy of Sciences was given the privilege of transportation, and when necessary, even accommodation, on the new launch "Albacore" during a recent patrolling and fishery investigating trip to some of the islands off our southern coast. Captain Nidever and his crew did all in their power to make the trip a successful one and to ensure the welfare of his temporary passengers, and hearty thanks are hereby accorded to the Commission and its able assistants for the kindness and courtesy shown to each member of the party.

Under the leadership of Dr. Barton W. Evermann, Director of the Museum of the California Academy of Science, the party consisted of the following besides himself: Dr. John Van Denburgh, herpetology and oology; Joseph R. Slevin, herpetology; Joseph Mailliard, ornithology. Dr. Evermann was interested in botany and oology on this particular trip. On its way to the starting point the party was joined at Los Angeles by J. Eugene Law, who was interested in herpetology and ornithology. Santa Catalina, San Clemente, San Nicolas and Santa Barbara islands were visited, though but a few hours stay was made on any but San Clemente, where several days were passed at different points, Wilson's Cove being the first landing made, on March 23, and which proved the most prolific of results of any point visited. The oological part of the trip was a distinct disappointment, but the other departments were very successful and many specimens were secured.

According to the lists in Howell's "Birds of the Islands Off the Coast of Southern California" (Pacific Coast Avifauna no. 12), the following are new records for the islands named.

On San Clemente Island Dr. Evermann was positive that he saw several Cactus Wrens (*Heleodytes brunneicapillus couesi*), and he shot at one at quite long range with a collecting pistol, but failed to secure it. We were lying at Wilson's Cove on March 24, and started collecting early in the morning on the ridge above the sheep corrals. Dr. Evermann at one time came over the top of a hill that separated us at the moment and called to me that there were some Cactus Wrens up there. I went to the top of the ridge as fast as possible and for some distance chased what I supposed were a pair of these birds but did not succeed in approaching within shooting distance, or even near enough for positive identification, before they disappeared. The next day Dr. Evermann saw several near the same spot, shooting at one with the pistol as above mentioned, but none of the rest of the party came across any of the birds nor were any signs of nests discovered in the cactus. There have been no records of this species from any of the islands, and it is unfortunate that no specimen was secured on this occasion, but it is hardly possible that any one with as much ornithological experience as Dr. Evermann could have been mistaken under such circumstances as he related.

On Santa Barbara Island, visited March 29, the Audubon Warbler (*Dendroica auduboni auduboni*) was seen by several of the party at very close range, it being quite tame around the house of the keeper of the island. Though no specimens were taken there was no possible doubt as to its identity. A Junco was seen by myself but not secured, probably *Junco oreganus thurberi;* and a Dusky Warbler (*Vermivora celata sordida*) was noted by both Dr. Van Denburgh and myself, but was not shot as it was impossible to retrieve it among the thick cactus where seen, and from which it did not seem to care to be separated. It was my good fortune to secure a Western Chipping Sparrow (*Spizella passerina arizonae*) and a Lincoln Sparrow (*Melospiza lincolni lincolni*), neither of which had been recorded from this island. It happened that several small sparrows popped up out of a small heap of dead ice plant near me and stopped for a moment on top of it, long enough for a snap shot. Two of these were secured and proved to be the Western Chipping and Lincoln sparrows. No others of these species were identified.

On Santa Catalina Island, March 30, a Pied-billed Grebe (*Podilymbus podiceps*)

was noted in Holland's Cove, swimming around our launch, and ashore at the same place a flock of Arkansas Kingbirds (*Tyrannus verticalis*), of half a dozen individuals, lit on a telephone wire near me and one was secured for the record. One or two others were noted as well in that vicinity.—JOSEPH MAILLIARD, *San Francisco, California, May 6, 1918.*

Extension of Known Distribution in Some Northern California Birds.—In company with Mr. W. C. Jacobsen, State Superintendent of Rodent Control under the Horticultural Commission of California, the undersigned was privileged to cover several of the northern counties of the state in rapid reconnaissance during the latter part of May, 1918. With previously known facts of bird distribution in the region traversed pretty well in mind it was possible to recognize any occurrence of species beyond their previously recorded limits. The more important cases of this sort were as follows:

Sayornis nigricans. Black Phoebe. On May 13 a pair was seen under a bridge across the Trinity River near Lowden; another pair was seen May 14 near and under a smaller wooden bridge at Hayfork; and a third pair the same day near a bridge over the East Fork of the Trinity River, at Minersville. In the second instance one of the birds was carrying nesting material. All three localities are in Trinity County; all possess a number of species of plants and animals usually found in the Upper Sonoran Zone, but in each place the bulk of the fauna and flora appeared to be Transition.

Aphelocoma californica immanis. Long-tailed Jay. Seen almost continuously on May 18 through the Upper Sonoran Zone in Modoc County, from Cornell on the east side of Tule Lake, to a point some seven miles southeast of Straw, and again along the escarpment between Canby and Alturas. In Lassen County the same day this jay was encountered near Madeline, near the shores of Horse Lake, and in the valley of Susan Creek five miles northeast of Susanville. In all these localities the Long-tailed Jay was closely associated with the juniper belt.

Cyanocephalus cyanocephalus. Pinyon Jay. A large straggling flock seen among the junipers near Straw, Modoc County, May 18.

Chondestes grammacus strigatus. Western Lark Sparrow. Noted at Weaverville and Hayfork, Trinity County; near Gazelle, in Shasta Valley, Siskiyou County; and seven miles southwest of Macdoel, in Butte Valley, Siskiyou County; as also at many points within the more commonly known range of the species. This bird is one of the frontier species of the Upper Sonoran Zone, in the direction of Transition.

Amphispiza belli belli. Bell Sparrow. Numbers noted in full song May 13 in the plant association characterized by the dominance of the chemissal (*Adenostoma fasciculatum*) on the south and southwest facing slopes towards the head of Sawpit Gulch, 3000 to 3500 feet altitude, on Shasta County side of divide between Redding and Weaverville (see Weaverville quadrangle, U. S. G. S.). The occurrence seemed to be perfectly normal and indicates the existence of this Upper Sonoran sparrow doubtless as a permanently resident species around the extreme head of the Sacramento Valley. The northernmost previous record-station for the Bell Sparrow is Rumsey, Yolo County (see Pacific Coast Avif. no. 11, 1915, p. 121).

Mimus polyglottos leucopterus. Western Mockingbird. Three individuals observed along the state highway in the suburbs of Corning, Tehama County, on May 20. This is exactly as might have been expected, since Corning is well within the Lower Sonoran life-zone, though near the northern limits of it in California. The extension of orchards of olive and citrus trees in that neighborhood is likely to favor the further spread of the Mockingbird. (See Auk, XXXVIII, 1911, pp. 293-300.)—J. GRINNELL, *Museum of Vertebrate Zoology, Berkeley, California, July 1, 1918.*

Long Waits for Sets of Winter Wrens.—On April 18, 1908, a nest of Western Winter Wren (*Nannus hiemalis pacificus*) was found in a small huckleberry bush, ready for the inner lining of feathers. On May 24 it contained six fresh eggs. On May 7, 1916, by watching the bird carrying nesting material, another nest was found among the roots of a fallen tree. When next examined, May 21, it was ready for the inner lining, on May 28 it was in the same condition, and on June 3 it contained one egg and not a bit of lining. On June 11 it was thickly lined with small feathers, and contained six eggs.—JOHN M. DAVIS, *Eureka, California, February 4, 1918.*

Large Set of Eggs of the Western Red-tailed Hawk.—I received a letter a short time ago from a former club member, Mr. O. F. Beekman of Wasco, Kern County, relative to the finding of an abnormally large set of *Buteo borealis calurus* which I thought might be of interest to CONDOR readers. The nest was found April 14, 25 feet up in a large cottonwood tree and contained two newly hatched young, two pipped eggs, and two eggs far advanced in incubation. I have heard of a number of sets of five eggs, but this is the first one of six.—LAURENCE PEYTON, *Fillmore, California, May 28, 1918.*

Supposed New Record for Central Kansas.—On June 10, 1918, while collecting near Solomon, in eastern Saline County, Kansas, I found a nest containing three eggs of the Painted Bunting (*Cyanospiza ciris*). I have spent several years collecting in this part of Kansas and have never noted the bird here before although I am quite familiar with the species, having collected it near Bartlesville in northern Oklahoma. Upon finding this nest I knew that I had made an important record, so returned three days later and collected the set and the female bird. The male was not seen. The eggs were highly incubated at this time. The identification is made certain by the fact that the female is distinctively colored on the back, a bright greenish olive, and because the eggs are well spotted, all the other species of buntings laying plain unspotted eggs.

Mr. A. K. Boyles, a taxidermist of Salina, Kansas, only a few miles west of here, stated to me that he had never known of the occurrence of this species in central Kansas. He is also familiar with the bird, having noted it in northern Oklahoma. Extreme southern Kansas (Barber and Comanche counties) seems to be the northernmost previously recorded locality (Goss, Bds. Kansas, 1891, p. 492).—A. J. KIRN, *Solomon, Kansas, July 20, 1918.*

Bird Notes from Admiralty Island, Southeastern Alaska.—The last winter has been a hard one in this section. It was all winter weather since last Thanksgiving, with snow ten feet deep the end of March. This was by far the worst winter I have ever seen here, and I believe that ninety percent of the deer will have died. In regard to recent papers in THE CONDOR about the migration of horned owls to the Puget Sound region, here too they have been numerous. The rabbits all died in the interior last year (1916), and the lynx and owls have all been moving to the coast during the last two years. They have almost cleaned up the grouse and ptarmigan, and the lynx are now doing well on mallards, etc. Last fall I shot three Bubos around the house, and a visitor shot one that had just killed a mink. An acquaintance, a reliable man, was trapping around Icy Point last fall and winter, and he says that he killed more than twenty owls with clubs or by throwing his trapping hatchet at them. He saw a great many more, some of them sitting around and hooting in broad daylight. One that he killed was eating a loon, not dead yet, one was eating a gull alive, one was eating a squirrel, one was eating another owl which was not dead yet, and one was eating a mink. Mink are very scarce, supposed to have been killed off by the owls. He found an eagle eating an owl, and I, myself, saw near a deer carcass signs that an eagle, presumably, had killed and eaten a white owl. I killed a very large Golden Eagle (*Aquila chrysaetos*) in January at Mole Harbor, Admiralty Island. He had been trying to catch a duck until it was so wet and weak that I ran it down on the flats. The owls all left Mole Harbor when the snow began to pile up in December. There is a territorial bounty of fifty cents on eagles, and over three thousand have been killed. The Alaska Council of National Defence is striving to have bounties placed on bears and all sea birds.—ALLEN E. HASSELBORG, *Juneau, Alaska, March 29, 1918.*

A Late Nest of the Swainson Hawk.—A nest of *Buteo swainsoni*, examined by the writer on the 12th of July, 1918, was found to contain two eggs which were apparently fresh. The bird was incubating. The eggs were entirely unmarked. A subsequent visit on July 20 disclosed only an empty nest, with no hawks in sight. The eggs were probably destroyed by men who had been at work in an adjacent field. The nest was well up toward the top of a cotton-wood tree on the bank of the Teton River, beside a ford. I first discovered it on July 7, when the bird was upon it, but I did not then climb up to examine it.

This is much the latest nesting date that has come to my attention. Incubation is usually begun in this locality (southeastern Teton County, Montana) during the last

week of May or first part of June. Since this species is known to construct a new nest, if deprived of its first eggs, the present nest is doubtless a case of that kind. My notes show that Swainson Hawks were seen at this place on May 13, one of them soaring high above the river with nesting material in its talons.—A. D. Du Bois, *Dutton, Montana, August 12, 1918.*

Notes from Southern California.—Franklin Gull (*Larus franklini*). A fourth record of this bird comes from the same locality as the three specimens taken by Mr. J. E. Law (Condor, xvii, 1915, p. 96). This gull was taken by myself on October 29, 1917, from a great flock of Bonaparte, Western, California, Ring-bill and Herring gulls, feeding on the sewage where it discharges into the ocean at Hyperion, Los Angeles County. In plumage it is the same as the birds taken by Mr. Law, an immature, probably of the year.

European Widgeon (*Mareca penelope*). On December 12, 1917, a clerk in one of the large public markets of Los Angeles called my attention to a pair of fine "Red-heads" exposed for sale along with numerous other ducks of various species on his counter. A quick sale followed, the birds proving to be of the above species. Both were in perfect adult plumage, marred only by absence of under tail-coverts, which had been stripped off in removing the entrails. The proprietor stated they had been shipped to him from Brawley, Imperial County.

Red Phalarope (*Phalaropus fulicarius*). The passing of famed Nigger Slough, as a result of drainage work begun in 1916, removes the last considerable area of breeding-ground for fresh-water birds in southern California. The reduction of formerly extensive deep-water areas to wide stretches of oozy mud, partly covered by a thin sheet of water, appears to have coincided with an unusual visitation of Red Phalaropes to this locality. This species was first noted on the beach southwest of Los Angeles, May 23, 1918, where several birds were taken and quite a number seen, at very close range, feeding about the cast-up kelp. On the 27th, several were noted at Nigger Slough, in company with thousands of the Northern Phalarope. Frequent inspection of the slough during the following week showed considerable numbers of the Red species, in every stage of plumage from the gray winter to full breeding garb, but a rapid decrease of the North ern. Both were practically gone on June 8.

Birds taken on the beach were greatly emaciated, while those taken at the slough were generally in good flesh, some of them fat, and all approaching breeding condition.—L. E. Wyman, *Museum of History, Science and Art, Los Angeles, California, June 15, 1918.*

When the Thrushes Cease from Singing.—In the California springtime we hear the sweet-toned ringing of the thrushes' song, that of the Russet-backed Thrush (*Hylocichla ustulata ustulata*) for the most part, and of other varieties as well, in some restricted parts. We instinctively note the first of these seasonal outbursts of joy, but how many of us take note of when they cease?

At first adding to our enjoyment of blossoming nature we soon become accustomed to the amorous outpourings of our avian friends and calmly take them for granted as a pleasing part of the fresh spring atmosphere, so that when they cease it takes us some time to awaken to the fact. Many times have I resolved to keep careful watch for the moment when these ringing notes would no longer be heard, and yet the season went by with this unnoticed.

This summer, however, I have had exceptional opportunity to take note of what happened as regards two species of thrushes. Going to the Bohemian Grove, on the Russian River about ten miles above its mouth, in Sonoma County, California, upon July 6 (1918), I found that in the darker and less disturbed part of the grove—where my own camp is situated—the Monterey Hermit Thrush (*Hylocichla guttata slevini*) was quite abundant, frequenting the lowest hillsides and occasionally appearing on the floor of the canyon, and in full song. During the many previous years of my camping there, but an occasional note had been heard, while no individual had been actually identified. This difference in habits was probably due to the extreme dryness of the nearly rainless winter and spring, with water very scarce on the higher levels around the grove.

The attendance in Bohemia was very light this year on account of so many members of the club being either directly or indirectly connected with war service, and human neighbors seldom appeared; so that passing most of the time quietly in my camp offered unusual opportunity to note the bird-life round about. There were certainly more birds of various sorts in the grove than ever noted before.

On the morning of July 20 I was suddenly struck by the absence of song, and from that moment nothing further was heard from the Monterey Hermit Thrush save for an occasional call note, the softly whistled "kooit". One or two were later seen on the ground near my camp and were approached, as they were feeding about, to within ten feet, making identification certain beyond a doubt. Being fairly sure that their song was heard on July *19*, and absolutely so as regards the *18th*, I can state positively that the singing stopped abruptly on the evening of either the 18th or 19th of July in this locality, and this in spite of the fact that a few birds must have been nesting very late in the season, as evidenced by a female taken on July 7 with the yolk of an egg in the oviduct.

The song of the Russet-backed Thrush did not cease as abruptly as that of the other, but was continued in a desultory manner for a few days and gradually died away, becoming less and less pronounced until it ceased altogether.—JOSEPH MAILLIARD, *San Francisco, California, August 9, 1918.*

A New Bird for Santa Catalina Island.—Howell in his "Birds of the Islands off the Coast of Southern California" (Pacific Coast Avifauna, no. 12, 1917), suggests that there has been relatively so little ornithological work done on these islands that a visit of several weeks to any one of them is almost sure to add one or two new migrants or winter visitants to the list. Proof of the statement is found in the fact that a stay of two days at Avalon, Santa Catalina Island, disclosed the presence of a bird hitherto unrecorded for any of the islands in the Santa Barbara Channel. The bird discovered, the Phainopepla (*Phainopepla nitens*), happens to be a summer visitant instead of a migrant or winter visitant. On June 12, 1918, I was on the south side of Descanso Canyon, just back of the new St. Catherine Hotel, getting better acquainted with a Dusky Warbler, when my attention was directed to a bird with conspicuous white patches on the wings, flying about some elderberry trees in the bottom of the canyon. Closer inspection disclosed a "Silky Flycatcher," and a moment later a second bird of the same species was seen. The graceful flight and the flycatcher habits left no possibility of mistaking the identity of the birds. The only other striking observations were regarding the tameness of Mourning Doves which fed within a few feet of the passersby; the common presence of the Mockingbird, heard everywhere; and the abundance of the Raven, five being seen in flight at one time.—HAROLD C. BRYANT, *Berkeley, California, July 1, 1918.*

Late Snowy Owl Dates.—In regard to the migrations of the Snowy Owl (*Nyctea nyctea*) last winter (1917-18) it may be of interest to report some late dates on which the species was observed by the writer and Mr. D. E. Brown of Seattle. These owls were seen daily at Westport, Grays Harbor, Washington, during the week of April 8 to 14, 1918.

The first owl seen at this time was shown to us by Mr. H. A. Dusenbery, who stated that they had been in that vicinity all winter. The first owl collected was taken by Mr. Brown on April 9. It was a large female, quite fat and with a full stomach. The contents of the stomach consisted of duck feathers, but it was impossible to tell of which variety. Another Snowy Owl was collected by Mr. Wilmer Dusenbery on April 11. This bird, again a large female, had the entire foot, tarsus, and upper leg bone of an American Coot (*Fulica americana*) in its stomach.

Just previous to collecting this bird, Mr. Dusenbery had shot a few sandpipers, and the owl on seeing this had come over to get some. Its foot was within eighteen inches of one of the specimens when it was shot. Mr. Dusenbery said that this was of common occurrence when the owls were plentiful during the winter.—STANTON WARBURTON, JR., *Tacoma, Washington, May 17, 1918.*

The Virginia Warbler in California.—On August 1, 1917, Mr. Halsted G. White, while carryiug on field collecting for the California Museum of Vertebrate Zoology, secured a specimen of the Virginia Warbler (*Vermivora virginiae*) at 9200 feet altitude near McCloud Camp, on Cottonwood Creek, east flank of White Mountains, Mono County, California. The bird is in process of molt from juvenal to first annual plumage. There are many of the juvenal feathers still remaining about the head and on the belly, and, of course, the flight feathers belong to the juvenal plumage. The annual plumage is so nearly complete elsewhere as to exhibit plainly the characteristic markings of the species—yellow crissum, yellow rump, and yellow patch on chest. The specimen is no. 28593, Mus. Vert. Zool. The age of this bird, and general "geographic reasoning", makes it seem not unlikely to my mind that this warbler, now for the first time recorded from California, occurs regularly as a breeding species on the White Mountains.—J. GRINNELL, *Berkeley, California, August 25, 1918.*

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J. GRINNELL, Editor

HARRY S. SWARTH, Associate Editor

J. EUGENE LAW
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EDITORIAL NOTES AND NEWS

As far as we are aware, bird banding has not been practiced to any considerable extent on the Pacific Coast. This year Mrs. Amelia S. Allen, of Berkeley, and Mr. J. S. Hunter, of the State Fish and Game Commission, have undertaken to band some wild birds. Supplies of the necessary bands together with instructions as to their use, and the objects of so doing, can be secured from Mr. Howard H. Cleaves, Secretary of the American Bird Banding Association, New Brighton, N. Y.

Dr. C. G. Stivers, of Los Angeles, a Southern Division member of the Cooper Club, is now Captain, M. R. C., Aviation Section, Signal Corps, with headquarters for the time being in San Francisco.

FEDERAL PERMITS REQUIRED TO COLLECT MIGRATORY BIRDS, THEIR NESTS AND EGGS FOR SCIENTIFIC PURPOSES

Collectors of birds, their nests or eggs for scientific purposes will be interested to know that the provisions of the Migratory Bird Treaty Act, which was passed by Congress and became a law on July 3, 1918, makes it unlawful to take, possess, or transport migratory game birds, or other migratory birds, their nests or eggs, without a permit issued by the United States Secretary of Agriculture in accordance with regulations under the new law which became effective July 31, 1918.

Applications for permits must be addressed to the Secretary of Agriculture, Washington, D. C., and must contain the name and address of the applicant, the name of the State, Territory, or District, in which the specimens are proposed to be taken, and the purposes for which they are intended. Each application must be accompanied by certificates from two well-known ornithologists that the applicant is a proper person to have a permit.

The permit will authorize the holder thereof to possess, buy, sell, or transport migratory birds, or parts thereof, and their nests or eggs for scientific purposes. Public museums, zoological parks or societies, and public scientific and educational institutions may possess, buy, sell, and transport in any manner at any time migratory birds, or parts thereof, and their nests and eggs, for scientific purposes without a permit. No specimens shall be collected, however, even for such institutions, without a permit.

Permits will be issued free of charge, and will be valid only during the calendar year of issue. They will not be transferable and will be revocable at the discretion of the Secretary of Agriculture. Persons holding permits are required to report on or before January 10 following their expiration, giving the number of skins, nests, or eggs of each species collected, bought, or sold during the life of the permit. Every package in which migratory birds, their nests or eggs are transported shall have clearly and conspicuously marked on the outside thereof the name and address of the sender, the number of the permit held by the shipper in every case where a permit is required, the name and address of the consignee, a statement that it contains specimens of birds, their nests or eggs for scientific purposes, and, whenever such a package is transported or offered for transportation from the Dominion of Canada into the United States, or from the United States into the Dominion of Canada, an accurate statement of the contents.

Holders of Federal permits are also required to comply with State laws and regulations governing the taking of migratory birds, their nests or eggs for scientific purposes.

In a letter dated August 10, 1918, E. W. Nelson, Chief of the Bureau of Biological Survey, gives assurance that the requirements under the new law will be made as little burdensome as possible. Reasonable time will be given for allowing collectors to become informed in regard to these regulations and to take the necessary steps to meet them. But after that anyone who collects without a permit is liable to arrest and prosecution in the Federal court.

MINUTES OF COOPER CLUB MEETINGS

NORTHERN DIVISION

MAY.—The May meeting of the Northern Division of the Cooper Ornithological Club was an outdoor meeting held at the home of the Secretary, Mrs. Allen, at three P. M. on Sunday, May 19, 1918. Dr. Evermann called

the meeting to order. The following members were present: Messrs. Davis, Evermann, Kibbe, Smith, Swarth; Madames Allen, Bamford, Ferguson, Kibbe, Knappen, Meade, Lueddemann, Schlesinger, Wythe. Visitors were Mr. Allen, Miss Barrows, Mrs. Bruce, Mrs. Evermann, Miss Ferguson, Mrs. House, Miss House, Mr. Meade, Mrs. Smith and Mr. Strong.

The minutes of the April meeting were read and approved and Mr. Frederick Alexander Schneider, one of the founders of the club who had dropped out for a number of years, was elected again to membership. The following proposals were made: Mr. M. Herrick Spaulding, Montana Agricultural College, Bozeman, Montana, by W. P. Taylor and J. Grinnell, and Miss Elizabeth Ferguson, 5 Panoramic Way, Berkeley, by Mrs. J. T. Allen. The committee appointed to consider the resignation of Dr. Gibbons reported in favor of establishing an absentee list with remission of dues for all members resigning to enter army service, such provision to be submitted to the Southern Division for approval. On motion of Mr. Swarth, seconded by Mrs. Ferguson, the report was accepted. Dr. Evermann then gave a very interesting account of the work of three of America's early naturalists, Audubon, Wilson and Rafinesque. After disposing of a "loan collection of specimens," the club enjoyed a short field trip through Strawberry Canyon.—AMELIA S. ALLEN, *Secretary.*

JUNE.—The regular monthly meeting of the Northern Division of the Cooper Ornithological Club was held at the Museum of Vertebrate Zoology at 8 P. M., June 20, 1918. In the absence of the president and vice-president, Dr. Bryant took the chair. The following members were present: Messrs. Andersen, Beck, Bryant, Carriger, Dixon, Grinnell, Hansen, Loomis, Swarth and Wheeler; Mesdames Allen, Culver, Ferguson, Gunn, Meade, Schlesinger, Smythe. Visitors: Mrs. Bryant, Mrs. Dixon, Miss Hittell, Miss Marsh, Miss Roup, Mrs. Roup, Mrs. Wheeler, Mr. Meade and Mr. Schlesinger.

The minutes of the May meeting were read and approved, and the Southern Division minutes for March, April, and May were read. Miss Elizabeth Ferguson, Berkeley, and M. Herrick Spaulding, Montana Agricultural College, Bozeman, Montana, were elected to membership, and the names proposed before the Southern Division in April and May (fifteen in all) were approved. Miss Eva Griffin, San Francisco, was proposed for membership by Mrs. Allen.

Business disposed of, the club enjoyed the privilege of listening to a talk entitled "A California Bird-Collector on South American Coasts and Islands" by Mr. R. H. Beck. Beautiful colored views were thrown on the screen, illustrating the life of the peoples of the different countries visited, as well as that of the petrels, penguins, ducks, cormorants, albatrosses and other birds. Adjourned.—AMELIA S. ALLEN, *Secretary.*

JULY.—The regular meeting of the Cooper Ornithological Club was held at the Museum of Vertebrate Zoology at 8 P. M., July 18, 1918. Dr. Evermann presided and the others present were Messrs. Anderson, Bryant, Carriger, Dixon, Grinnell, Kibbe, Lastreto, Loomis, Noack and Trenor; Mesdames Allen, Blayney, Ferguson, Elizabeth Ferguson, Kibbe, Kluegel, Lueddemann, Meade and Wythe. Visitors: Mrs. Dixon, Mrs. Evermann, Miss Evermann, Mrs. Roup, Miss Roup, Mrs. Thomson, Miss Thomson, and Mr. Meade. The minutes of the June meeting were read and approved. Miss Eva Griffin was elected to membership in the club and the name of Mrs. G. E. Kelly, Alameda, was proposed by Mrs. Bessie W. Kibbe. A letter from Mr. Remington Kellogg, containing interesting comments on the wild life in France, was read by Dr. Grinnell.

In the absence of Dr. Miller, who was prevented by illness from giving his talk on the fossil birds found in the asphalt beds of southern California, Mr. Joseph Dixon gave an illustrated talk on the life histories of the Pacific Horned Owl, the Long-eared Owl, and the Prairie Falcon, as observed in southern California. After some discussion the club adjourned to enjoy a closer inspection of the skins exhibited and also of some very attractive paintings of ground squirrels by Louis Agassiz Fuertes.—AMELIA S. ALLEN, *Secretary.*

SOUTHERN DIVISION

MAY.—Regular monthly meeting of the Southern Division, Cooper Ornithological Club, was held May 26 at 3:30 P. M. at the home of Mr. W. Lee Chambers, at Eagle Rock. President Miller was in the chair, with other members present: Messrs. Brown, Chambers, Edwards, Law, Moran, Morcom, Reis, Rittenhouse, Wyman and Zahn; Mesdames Law and Harmon. Visitors were Mr. Carruthers, and Mesdames Chambers, Edwards, Moran, Pratt and Wyman.

Minutes of the March and April meetings were read and approved. On motion by Mr. Reis, the Secretary was instructed to cast an electing ballot for the parties whose names were proposed for membership at the last meeting. New names presented were: Harry Stephen Ladd, St. Louis, Mo., by Mr. Chambers; Miss Lillian Holbert, Fort Worth, Texas, by John B. Litsey; and M. Herrick Spaulding, Bozeman, Montana, by W. P. Taylor and J. Grinnell.

A letter from the Chairman of the Massachusetts Fish and Game Commission, regarding the status of the Heath Hen, also an extract on the same subject, from the annual report of that Commission, were read. These showed a sad decrease in numbers, attributed to a fire which destroyed breeding birds, cover and food.

In the general discussion Mr. Reis and others told of finding many nests of smaller birds occupied by white-footed mice, which had destroyed the eggs or buried them in the nest material. Mr. Brown commented upon the great numbers of White-throated Swifts seen in Tahquitz Canyon, and upon the finding of a white Fulmar dead upon the beach recently. The unusual number of Western Tanagers this spring also was mentioned. Business ended, the members spent a most enjoyable hour in Mr. Chambers' splendid library, and in search of birds about the spacious grounds. An interesting feature was the nest of a Costa Hummer fitted neatly to the top of a section of bamboo fish pole, of nearly the same diameter as the nest, and in use as a support for a small tree. Adjourned.—L. E. WYMAN, *Secretary.*

JUNE.—The regular monthly meeting of the Southern Division, Cooper Ornithological Club, was held at the Museum of History, Science and Art, at 8:00 P. M., June 27, 1918. In the absence of president and vice-president, Mr. Daggett was acclaimed chairman of the meeting. Other members present were Messrs. Hanaford, Holland, Moran, Reis, Robertson, Shepardson and Wyman. Mrs. Moran, Miss Ingram, and two other ladies were visitors. Minutes of the May meeting were read and approved, followed by reading of minutes of April and May meetings of the Northern Division. On motion by Mr. Shepardson the secretary was instructed to cast an electing ballot for the parties whose names were presented at the previous meeting. H. E. McMinn, Professor of Biology, Whittier College, was proposed for membership by Dr. C. O. Esterly. On proper motion the members unanimously approved the action of the Northern Division in establishing an absentee list, with remission of dues, for members resigning to enter army service.

In the general discussion that followed the formal business meeting several members related recent experiences in the field. Mr. Reis produced a specimen of the mouse that he had reported at the May meeting as having occupied many nests of small birds in the canyons of the Palos Verde hills, to the destruction of eggs and young; it proved to be the common house mouse. A tray of skins of finches, longspurs, etc., received the usual attention. Adjourned.—L. E. WYMAN, *Secretary.*

JULY.—The regular monthly meeting of the Southern Division, Cooper Ornithological Club, was held at the Museum of History, Science and Art, at 8:00 P. M., July 25, 1918. President and vice-president being absent, Mr. F. S. Daggett was named as chairman of the meeting. Other members present were Messrs. Brouse, Hanaford, Holland, Howard, Law, Owen, Robertson, Stormont, Swarth and Wyman. Mr. Hodgkins and Mrs. Howard were visitors. Minutes of the June meeting were read and approved. On motion by Mr. Robertson, the secretary was instructed to cast an electing ballot for Prof. H. E. McMinn, whose name was presented at the previous meeting. New names presented were: S. Herbert Jenks, Pasadena, and F. B. Hart, Jr., Oakland, by W. Lee Chambers; Reginald Hodgkins, Los Angeles, by Virgil Owen. The following names were received from the Northern Division for approval: Dr. R. M. Leggett, San Francisco; Adrey E. Borell, Fresno; and Frederick Alexander Schneider, San Jose.

Business disposed of, the usual discussion of matters ornithological followed. Mr. Law spoke of conditions in the Bluff Lake locality of the San Bernardino Mountains, Mr. Howard told of a trip to the San Jacintos, also of a visit to Baldwin Lake, in the San Bernardinos, where he saw a pure albino Eared Grebe, and Mr. Swarth mentioned a number of breeding birds of the University of California campus, at Berkeley, but which are known to breed in Transition zone only in southern California. Mr. Swarth also spoke briefly on economic work being done by the Museum of Vertebrate Zoology, chiefly among ground squirrels, and of field work done by himself in 1917 in the deserts of southern Arizona. Adjourned.—L. E. WYMAN, *Secretary.*

For Sale, Exchange and Want Column.—Any Cooper Club member is entitled to one advertising notice in each issue free. Notices of over ten lines will be charged for at the rate of ten cents per line. For this department, address W. LEE CHAMBERS, *Eagle Rock, Los Angeles County, California.*

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MEETINGS OF THE COOPER ORNITHOLOGICAL CLUB

SOUTHERN DIVISION: At the Museum of History, Science, and Art, Exposition Park, Los Angeles. Time of meeting, 8 P. M., the last Thursday of every month; or on the Tuesday evening preceding, when the last Thursday falls on a holiday. Take south-bound car from town; on Spring Street, the car marked "University", on Hill Street the car marked "Vermont and Georgia". Get off at Vermont Avenue and Thirty-ninth Street. Walk two blocks east to Exposition Park. The Museum is the building with the large dome.

NORTHERN DIVISION: At the Museum of Vertebrate Zoology, University of California, Berkeley. Time of meeting, 8 P. M., the third Thursday of every month. Take any train or car to University Campus. The Museum of Vertebrate Zoology is a large corrugated iron building situated on the south side of the campus immediately north of the football bleachers.

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